

PERSONAL

There is a recurring daydream that I suspect most of us enjoy from time to time. We suddenly find ourselves put in complete charge of education with absolute power over what is taught. Alarmed at all those nawsel shots of demonstrators hurling rotten eggs and squashed tomatoes at politicians and missing by a mile, I find my favourite fantasy is to make cricket and rounders compulsory. It is the only way of improving the nation's aim.

However, what always makes me press the ejector seat on this particular Walter Mitty indulgence, and return to teaching my group, chairing the meeting, or whichever other reality I have temporarily escaped from, is the sheer responsibility of being such a one person *El Supremo*. Moreover, the tradition in education in this country is that no single individual should be allowed to exercise such awesome power.

Some of the most interesting discussions about control over the curriculum took place during parliamentary debates of the 1944 Education Act. Several MPs had very clear ideas about what they would prescribe for children given half a chance. One demanded something a lot more lethal than squashed tomatoes: "Is it to be obligatory to give teaching and training to

young people on the composition and duties of the Armed Forces of the Crown? ... will this instruction also include training on a miniature rifle range?"

Fortunately, the architect of the remarkable 1944 Act was R A Butler, and his reply to some of these wilder demands for compulsory this and that was a wise counsel against any would-be Crazy Horse, whether a minister or a local director, being allowed to impose his will.

His words are worth noting, for they have acted for nearly 40 years as an unseen guideline to those in power: "It has been felt that, in certain areas, there is a danger that the Secretary, or director of education, may fancy himself in certain subjects, or in some branch of study, and may go into a school and, by an *obiter dictum*, try to direct the secular instruction of that school more, as he would say, according to the wishes of the authority. That sort of interference with the individual life of the school is undesirable."

Indeed Churchill too recognized the dangers, and Butler tells in his engaging autobiography *The Art of the Possible* of a conversation between the two of them when Churchill asked him to introduce more patriotism into schools: "Tell the children that Wolfe won Quebec," I said that I would like to



Ted Wragg

Influence what was taught in schools but that this was always frowned upon. Here he looked very earnest and commented, 'of course not by instruction or order but by suggestion'."

All of which makes very sinister indeed the ham-fisted attempts of Sir Monty Python (65), a Westminster pensioner, and one or two of his ministerial buddies to control the nation's thoughts by proscription. The culling of advisory bodies has also served to funnel more personal power to national political leaders. Examples of direct interference are mounting up

ever more rapidly, and have been well documented in *The TES* during the last two years.

Recently we have seen Sir Monty's forlidding of questions on the social consequences of science, such as pollution or nuclear power, in 16-plus exam syllabuses. He has also invaded teacher training, tried to prescribe single subject specialism for primary and secondary teachers, and stop graduates in certain subjects from training at all.

The Monpower Services Commission has hived social and political education which might touch on themes like unemployment, and indeed drama proposals to the MSC have been subjected to similar scrutiny. That imaginative curriculum developer Norman Tombs, would-be proprietor of the Norm Academics, interfered in a school's role play exercise which was explaining cultural differences, and Rhonda Boyson has held book sex education proposals first at the DES and subsequently at the DHSS. Opponents of sex education seem afraid that pupils may go out and practise what they have learned, but since school lessons often have the exact opposite effect, sex education classes may turn out to be the best form of birth control since the dawn of the human race.

What on earth, one speculates, would a ministerial-inspired curriculum look like? A new series of primary school readers *Monty, Rhodes and Norm find Treasure* or, for older pupils, *Monty, Rhodes and Norm meet Dracula* (Dracula lost in extra time) might have humorous appeal. Or what about the BBC scrapping the long-running radio programme *Sing! Sing! Sing!* in favour of *Singalongalong*?

Indeed, now that some schools radio broadcasts are put out at night why not a series of his speeches under the title *Monty's Greatest Hits*? Since some two million homes are said to eavesdrop on night-time transmissions, the BBC has a real chance not merely to entertain and educate them, but to cure them.

Through much of this century we have developed an enviable tradition of localism, whereby schools are encouraged to work out their curriculum, comparatively under the supervision of their local authority and with occasional guidance and advice from the DES. It is bizarre that the first individual threat to this precious freedom should come not from a brilliantly inspired curriculum developer, nor from some greatly experienced and esteemed educator, but rather from the pomp-out-of-touch fantasies of a powerful politician.

AUSTRALIAN DIARY

Back with a bump. Returning from Australia at this time of year means a 24-hour journey from spring to autumn. Fleeting, leader skies and a hint of drizzle seem suitable images for the present state of English education.

Across the other side of the world, Bob Hawke is busy talking the economy up, Australia has won the America's Cup, and politicians still speak as if more education were a good thing in itself (and one reason why the Japanese and the Singapore Chinese and - for that matter, the Americans, the Swedes and the Norwegians, are making a better fist of the 1980s than countries like Australia and Britain at the bottom of the OECD league-table). Australia means to do something about this - to lack itself up by its own bootstraps - unlike Britain where cosmic pessimism reigns and education is just another consumer good, to be rationed by the nation's purse.



Car maintenance on the curriculum

Sixth-form colleges flourishing

How the sixth-form curriculum is managed varies from one Australian state to another. Some states still have an external Higher School Certificate examination, and a broadly academic programme, alongside which recently introduced "transition" education courses sit uneasily. The success of "transition" inevitably varies but there is the suspicion that all too often it takes the form of a frantic attempt to dream up "exciting" unconventional courses with no particular outcome in terms of educational training or continuing education, for young people who have already got relatively little out of 11 years of general education.

Canberra, on the other hand, has developed a system of six-year secondary schools, where students stay on to complete their 12th year, and senior colleges for years 11 or 12 along the lines of sixth-form colleges.

I spent a morning at Dickson College, an excellent institution in building developed from a pre-existing secondary school.

Clearly there was plenty of evidence that the curriculum had been broadened to include a well-equipped motor vehicle maintenance course and facilities for a course on motor body-work repairing, which enabled students to spend a year learning how to repair old bangers and get them back on the roads. The aims and the approach were "educational", not vocational - the course did not carry any implied credit for apprenticeship or technician training - but it certainly seemed to succeed in engaging the full

energies of the students, and leading them through practical activities which they enjoyed and valued to serious work on the theory and principles of motor engineering.

One measure of the success of these schools is the staying-on rate - rather more than 80 per cent stay on to year 12. Another is the evidence of what the students themselves say. A recent evaluation of the system by an academic at the Australian National University, Don Anderson, found student opinion to be as favourable as the staying-on rate would lead you to expect.

But it seems that the last 10 per cent of the rise in the staying-on rate has increased the number of "involuntary" students and begun to produce motivational and discipline problems not encountered before.

What has made possible the broadening of the sixth-form course - not just by introducing excellent courses in practical subjects, but also by offering a spread of modules to meet the needs of a wide range of ability - has been the replacement of the HSC by an internal assessment, moderated externally by a system of academic aptitude tests.

The schools, therefore, have a much greater degree of freedom for curriculum development. But courses which are to be the basis of matriculation have to be approved by an accreditation council. The majority of the courses which serve to broaden the curriculum do not carry accreditation for higher education purposes.

A handful of aces

The dispute on aid to non-government schools rumbled on throughout the period of my stay and will no doubt do so for many months to come. Perceptions changed from state to state: In New South Wales there was a tendency to play down the threat to the independent schools; a 40 per cent Catholic vote (traditionally Labour) meant that too many parents had a direct interest in the continuation of aid. The open opposition of the Catholic hierarchy would be a formidable obstacle.

It became clear that what caused anxiety to administrators was the risk of the indefinite extension of the scheme as more and more religious sects seized the opportunity to get government finance for new schools.

I visited the Parkmore Full Gospel College in a suburb of Melbourne. Trevor Field the headmaster, runs the school of 80 children, ranging from 5 to 16, with one or two staying on beyond that age.

The school is one of about 70 set up using the methods and materials of a Texas fundamentalist group going by the name of Accelerated Christian Education. ACE could be said to "brandish" the system, providing a handbook of instruction on how to set up a school, and a supply of pre-packaged teaching materials.

The teaching method consists of sitting children in carrels, to pore over work-books for 40 per cent of their time with a heavy concentration on English, maths or religious education. As you might expect, the packaged material for English was, in large measure, a reinforcement of the RE, with liberal quotation from Scripture and a strong moral content.

Mr Field made it clear that reading material for English (and for any other subject) was always "carefully" examined to make sure it was consistent with the school's religious beliefs. Biology was taught, and evolution and creationism were offered side by side, as Mr Field put it, a strong bias towards creationism.

Whether the system actually produced anything which could be called "acceleration" was not clear. Mr Field said that the school had a fair proportion of children in need of remedial education. The discipline was one of the features of the school which parents paid for - various rewards and punishments were on offer including the inevitable "paddle" for "moral offences".

The fees of parents were about \$1,000 a year (2000) and the school would receive an equivalent sum from the state of Victoria and from the Commonwealth. Mr Field himself

was a former high school teacher with 16 years' professional experience and the seven members of staff all had teaching qualifications. All in all, the facilities were pretty modest but the parents got what they paid for, a protected educational environment based on a clear religious doctrine which permeated the whole.

It is only to see how a school like this might raise difficulties for a state government, with strong doubts about the adequacy of the curriculum and the range and variety of the facilities. Equally, it was recognized that once the state begins to pick and choose between dominations it soon gets into deep water.

Drifting into a new deal

I wrote last week about Senator Susan Ryan's grand vision of the comprehensive reform of curriculum, structure and examinations needed to transform Australian education from being a "low rotation" system to one in which 70 or 80 per cent of pupils would stay on to 17 or 18. In Victoria, I heard a rather less idealistic, but more convincing version of the same thing from administrators in the state education department.

There would be, I was assured by Ian Allen, an executive director, no full frontal assault on the curriculum

and the examination system. But the trends were pointing towards more people staying on because the job was disappearing.

As the numbers of stayers on rose, so would the curriculum gradually change to accommodate them. Meanwhile, the examination system was also in the process of reform and within a few years the picture would have altered.

Reform by drift? Adjustment in the face of external pressures? All a good deal more convincing than a politician's propaganda in Canberra? But will it happen fast enough to the growing army of young unemployed? Or will the employment lobby get the initiative back, as in Britain?

One reason to be dubious about system-wide curriculum reform could be that Victorian is already saturated with structural reform, and more reform than in the education office.

The schools are now getting used to a new decentralized administration. Every school now has to have a school council composed of elected representatives of the staff, the pupils (in the case of high schools) and the parents. This will be the governing body responsible for the curriculum and spending the school budget. The local move is to make the school council responsible for appointing its head.

This (for Australia) might not be easily with the system Ryan. Perhaps this is why some people see the drift as the best policy.

Stuart Mackay

No 121 CROSSWORD by Ruff

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Across

1. Chinese leader holds a bill for port (5)
4. Jingo gold in 1971 (6)
6. Infamously sick (3)
7. Lost again perhaps in thousands of the old days (10)
10. The work of these artists is above our heads (7)
11. Very clear - to being (5)
13. Thin sun, where out, will hardly encourage it (6)
15. A professional apt to (8)
16. Eastlake centre (5)
19. Its strength it can be shown by proof (7)
21. This may mean extra work (6)
23. Regret expressed in a French way (3)
24. Dogs and sex orgs. bantered (5)
25. Sun, sunset (5)

Down

1. Not a stock exchange or enormous hotel (6)
2. A bed for one (5)
3. Cat requires to be quite a few in the past (6)
4. Bill for publicity (6)
5. Rattle cannot be a few (6)
6. Deal (5)
7. Open letter - perhaps in the past (6)
8. The "revelation" (6)
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Educational Supplement

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Entranced by the spelling class

by Mike Durham

A country doctor has become the talk of school staffrooms in Staffordshire following his experiments with hypnosis on teenage pupils.

The GP, a qualified hypnotherapist, spent six months mesmerizing a group of 15 pupils - with spectacular results. At the pupils reported an improvement in their attitude to school. Most said their concentration and memory were better, and they enjoyed their work more. A few even claimed to be looking forward to exams.

But the doctor regards his experiment as a failure because, in the end, none of the pupils showed any noticeable improvement in exam results.

The GP - who talked to *The TES* on condition that he remained anonymous - picked the teenagers at random from among his patients. Most were 14 or 15 and they attended Painsley School, Cheadle High School and by the Bridge High School, near Stoke-on-Trent.

"I've always been interested in the further limits of human ability," he said. "So I thought it would be interesting to see if I could improve the children's performance in class."

In weekly sessions, the GP hypno-

Continued on page 3



Spoonful of hypnosis helps the schoolwork go down...

Picture: Laurie Spenser/Network

Double blow to Sir Keith's schemes for staff quality

by Bert Lodge

Less than six months after announcing he had closed the loop-hole which allowed teachers to enter teaching, Sir Keith has been hit by a double blow.

And another of his aspirations for raising teaching quality - that of requiring teachers to teach only the subjects they graduate in - will probably never be workable, DES officials have warned. Not enough graduates will be willing to teach by the 1990s, they say.

The double blow to Sir Keith's ambition to tighten up teachers' qualifications is revealed in new information leaked in confidential papers to two advisory committees.

These show that regulations drafted years ago intended to allow technicians and other skilled workers to fill shortages in schools are now being scrapped to allow untrained graduates in maths and science to continue to creep into the profession.

A White Paper on teaching, published only in March, Sir Keith announced the extension from training for maths and science graduates to all subjects by the end of this year. A spokesman for the Universities

Exam marks 'poor gauge of schools'

by Nick Wood

Exam results throw little light on how well a school is doing its job, particularly if it serves a poor area, according to interim findings from a Government-funded study.

The average pupil attending the "best" school in such an area will get just one CSE grade 3 more than his classmates in average schools in the same neighbourhood, it says.

In favoured areas, the school with the best exam results typically scores average performance by two C level passes per pupil.

The findings come from Dr John Gray and Mr Ben Jones of Sheffield University, who are conducting a three-year investigation, funded by the Social Science Research Council, into ways of measuring how well schools are performing.

They are based on data from six L.A.O.s, covering 150 secondary schools, which have provided information both on exam results and the social backgrounds of their pupils.

Dr Gray says that around 80 per cent of the observed difference between the exam results obtained by schools can be explained by variations in the intellectual ability and social backgrounds of their intakes. Only 20 per cent - "considerably smaller than the sorts of figures usually bandied about in public debates" - can be laid at the door of the school.

But he denies that he is echoing an earlier generation of researchers who maintained that schools made no difference to the performance of their pupils. The effect attributable to schools, though small, is "crucial", he says.

"I would want to send my child to a school that got an extra O level, especially when you remember that a difference of one point on the UCCA scale can mean the difference between success and failure when applying to university."

"But I am more interested in how you 'teach' when a school serving a disadvantaged area is doing a good job. If you use the conventional measure of exam performance, it is one CSE grade 3. That's a pretty small difference."

The limitations of exam results in distinguishing between good and bad schools serving poor areas highlighted the need for more sensitive and revealing methods of assessing schools, he added.

A major aim of the study is to encourage L.A.O.s to collect data on other aspects of school performance, for instance truancy rates and suspensions and exclusions, and to investigate the extent to which such information can provide a reliable yardstick for making comparisons, Dr Gray said.

Brent plan boosts blacks

Controversial proposals to give black parents much greater control over their local schools are to be put before councillors in Brent.

They involve appointing more black governors and could lead to black teachers being directed into schools with high numbers of ethnic minority children.

Mr Ron Anderson, chairman of the education committee and a member of the working party that is drawing up

the plan, said that the new approach would initially be recommended for three schools in the borough.

But he fully backed newspaper reports that the working party would be calling for all-black schools for black pupils and black teachers, he said.

"Any type of segregation of black children from white would be a retrograde step. We have no intention of changing our intake policies."

THIS WEEK

White Paper gives Sir Keith Joseph unprecedented powers to cut London teacher jobs

Mouths of babes

Industry education has reached the infants - and they are asking some awkward questions about adult ways.

Party pieces

The Conservative Party conference found time to discuss schools and more lively matters.

IEA reorganized

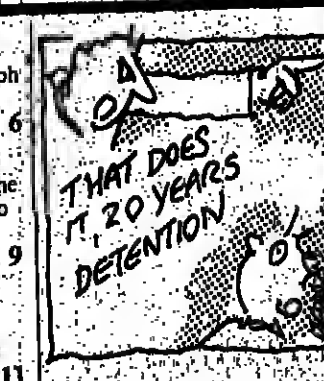
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Platform

The YTS challenges industry has so far failed to meet

Something completely different

John Cleese's training films won a Queen's Award for Industry but he regards his years as a school teacher as wasted

Arts/Books

Everyone's other country: Naomi Lewis reviews *The Oxford Book of Dreams*; Bernadette Folliot on narrative verse; Brian Morton on Channel 4's series *The Nation's Health*; Michael Clarke on Russian art; N J Macintosh on psychology; children's literature. Maths and history textbooks.

Resources/media

Felicity Grant on the future of schools broadcasts; Hugh David

celebrates Blue Peter's 25th anniversary

celebrates Blue Peter's 25th anniversary

EXTRA

Mathematics: What's the point in learning maths? Why can't we do real sums? Can micros play a part? Are calculators in schools? New challenges in applied statistics and routes to independent thinking. Plus the beauty of curves

Sir Keith's London takeover

The Government calls the White Paper setting forth its plans to wipe out the GLC and the metropolitan counties *Streamlining the Cities*. They might have said the same thing about Dresden.

There have certainly been plenty of critics of the overlap and expense caused by this tier of local government, which resulted, of course, from the reorganization carried out 10 years ago by a previous Conservative administration. On the evidence of last week's White Paper, however, this second bash at the job had been even more hastily thought out than the first one — as a sop to throw to a party conference.

It seems to be especially true of the provisions for the constitutional basis of the Inner London Education Authority. This would remain a unitary body but be controlled by a Joint Board composed of elected members nominated by the inner London boroughs. Since this is not as sudden as abolition, or as dramatic as breaking up the authority and handing education to the boroughs, reaction to the ILEA proposals has been muted in comparison with other aspects of the plan which has tended to turn into ritual Red Ken baiting.

It therefore needs to be spelled out clearly that this White Paper — taken together with the Government's other current proposals for rate limitation — would give the Secretary of State for Education far greater powers than he has ever enjoyed before. It would be a temporary break with the principles of local educational autonomy as set out in the 1944 Act and, by giving the DES direct power to control spending and staffing, bind the new authority hand and foot, for the rest of this decade.

The White Paper envisages two separate pieces of legislation. One would abolish ILEA in its present elected form when the current GLC/ILEA term of office comes to an end in May 1987; the other would establish a Joint Board from spring 1986, with a membership reflecting population size and political representation in each borough.

There is said to be considerable disappointment on all sides of the political spectrum that the well-supported proposal for a directly elected ILEA failed

to win the day. In theory, at least, more direct democratic control might have been a way of making education more accountable and giving parents more power. But in reality this idea never stood much of a chance: the opposition to ad hoc elected bodies is, and ought to be, strong because they invite all the abuses of single issue politics. From Mrs Thatcher's point of view there was the added disadvantage that it was assumed that an elected ILEA would still have a built-in Labour majority. The Conservatives set great store by strengthening the link with the borough ratepayers.

Criticisms suggest the Joint Board may have rather stronger Tory representation than the existing ILEA but not necessarily to the extent of toppling the Labour majority. This, presumably, is one reason why the Secretary of State will take financial and staffing powers for three "transitional" years, from 1986. After that, the Joint Board for inner London education will be subject to the same rate limitation arrangements as all other I.E.A.s.

What is still in question, however, is how the rate limitation proposal will operate. It could be that the draconian measures for controlling inner London education spending are inspired by fears that once again, the ACC and the House of Lords will manage to dish rate-capping because of its fundamental incompatibility with democratic local government. The present philosophy is "if you can't get away with rate-capping, try knee-capping." But is this constitutionally sound?

Under the worst possible scenario for schools and colleges in the nation's capital, the Government would bring its rate-capping legislation into force in 1985, as planned. That would coincide with the year in which the elected members in charge would be seconded from the boroughs to provide an interim Joint Board for one year. They would not necessarily have any experience in education, and would certainly not have been elected on any kind of election manifesto. They would have to spend half their year in office coping with a budget prepared by the "previous administration," and the other half preparing one to be seen through by their successors.

If this year's figures are anything to go by, this inexperienced body might have to grapple with

cuts of £100m, the gap between the Government target and the ILEA budget. Obviously cuts in ILEA's large budget are possible, but precipitate axing might mean many teachers' jobs.

The 1980 Report on ILEA by Her Majesty's Inspectorate has been cited to support the White Paper aspirations about "improving the standards and cost-effectiveness of the service." The inspectors' criticisms about spending and inefficiency mainly related to alleged duplication of resources. Savings have been made on resources since then, and mostly used on special measures elsewhere, but in any case these sort of economies could not produce cuts of much more than 2 per cent.

There does not seem much doubt that large-scale staff redundancies will be necessary if the proposals go through, and they are clearly envisaged in the White Paper. There is no knowing how they will be carried out once the Education Secretary starts to exercise direct control, but freezing of vacant posts, for example, would immediately affect both curriculum and administration in an arbitrary way.

It is indeed difficult to see why this should lead to improved standards. Even with the best of intentions, borough councils may need larger memberships to find enough people with enough time to take on this heavy extra responsibility.

Education on a London-wide scale has a long and honourable history. Of course ILEA has its faults and has managed to get away amazingly generous budgets by current standards but, as Christopher Price pointed out recently in *The TES*, Matthew Arnold noted 100 years ago that it cost 50 per cent more to educate a child in London than it did anywhere else.

What is profoundly depressing for everyone who cares about education in London is that all this comes at a time when standards are starting to improve in secondary as well as primary schools, attendance figures are better, the Marguerite and Thomas inquiries promise curriculum reform, and the equal opportunities and multi-ethnic initiatives are getting under way, along with other measures aimed at under-achievers. There is a real fear that now everything will be brought jolting to a halt and that officers and inspectors will have to spend the next five years undoing all they achieved in the last five.

COMMENT

A first look at TVEI

Elsewhere in this issue, Philip Venning reports on the early progress of three of the 14 Technical and Vocational Education Initiative projects in Devon, Dorset, Hampshire and Hertfordshire. For obvious reasons it is mainly a matter of reporting aspirations at this stage. The TVEI has been set up at break-neck speed. The proposal itself was sprung on the world less than a year ago — a brilliant coup for Mr David Young, an opportunist's stroke which caught the Prime Minister's imagination and one which by-passed all the normal consultations. But when launched it was no more than a half-baked idea, all the planning remained to be done, and the only people who could do it were the local education authorities and the schools.



TVEI pupils at St James High School, Exeter.

Various questions seem to be emerging about the nature of the options which pupils will be invited to exercise at 14 and the extent to which they involve irrevocable commitments or exclusive choices. These questions go to the root of the secondary school curriculum dilemma — how to reconcile the objectives of a broad, general education with a realistic recognition of a variety of talents, interests and outcomes. The limitation of the T and V aspects of TVEI to 30 per cent of the programme seems to retain the possibility of a genuine common core — but also emphasizes the often-overlooked distinction between diversified curricula with a common core and the much more prescriptive notion of a common curriculum.

Barnsley's TVEI scheme shows some of the signs of strain which are implicit in the desire to make it a success while also making sure it doesn't get any special privileges or treatment which might make TVEI

pupils more equal than others. There seems to be no way out of this maze: an exemplary scheme, intended to influence the whole system by demonstrating what can be done under favourable conditions with extra resources, is bound to bring unequal benefits to those lucky enough to be chosen as guinea pigs.

This, of course, makes it even more desirable to ensure that those taken into the scheme are a reasonable cross-section of the school population. First impressions seem mixed on this score. Some authorities have achieved a very credible mix of ability and gender. Others are finding it more difficult. Barnsley, for instance, has reportedly found it particularly difficult to overcome the sex-stereotyping which restricts demand from girls for certain technical options.

It will be important, too, to look at the experience of schools in areas surrounding those which are now receiving the TVEI boost. Some teachers in Devon schools beyond the catchment areas of the TVEI project complain that while MSC cash for expensive new equipment flows like

water for the chosen few, elsewhere in the county there is no money for new books for a science department which wants to change its chemistry course, or even to maintain the equipment and resources required for the last generation of curriculum development projects. If TVEI is just a new patch sewn into old garment then it would be wise to look out for splitting at the seams.

No case to answer

In *The Times* on Monday, Lady Cox, Dr John Marks and Dr Maciej Pomian-Szednicki attempted to shrug off the damaging criticism of their purported study of *Standards in English Schools* (in *The TES* July 8 and 15) and now, as *The TES* showed on September 30, in an internal assessment by DES statisticians by roundly asserting that "we are capable of refuting the criticisms which have already been published." They also (as far as their own) again talked about demanding the right of reply.

Readers may be interested to know that Lady Cox and Dr Marks tried to raise a complaint to the Press Council about *The TES* treatment of the book. It will be recalled that this treatment included two long and scholarly review articles by Dr John Oray of Sheffield University. *The TES* also offered Lady Cox and Dr Marks the chance to write a 1,200 word article in which they could have set out the refutation which they now tell the editor of *The Times* they left their fingers. They failed to take up the offer. Likewise, the Press Council failed to take up their complaint, finding no case to answer against *The TES*.

no comment

But after five years of working closely with the Department of Education and Science, you gradually begin to be assimilated by the system. After 10 years, I think I would have become a Whitehall mandarin. I was beginning to see Treasury officials as almost human. It was as bad as that.

Sir Edward Parkes, former chairman of the University Grants Committee, interviewed in the *Yorkshire Post* on September 29, October 10, 1985.

Second opinion

Why the careers service should stay with the I.E.A.

The careers service is on trial. It will be judged on its contribution to the Youth Training Scheme. The trial will be pronounced at the close of independent review probably due 1985. There is the clear threat of another MSC take-over.

Nor that the service fears judgment. Careers officers provided the main basis for local planning and the knowledge of employers' needs which schemes have been based on. Through their influence on area power boards, they ensured that the scheme has been based upon the titles and inclinations of school leavers. The great majority of employers, crisscrossing careers offices.

Next year's planning will be still. As careers officers monitor people's progress within schemes, their advice to next year's leavers will be sharpened.

Whatever happens, the careers will be active. Its part in the YTS will be central. As Mr David Young and Geoffrey Williams have said as much, Peter Morrison, minister responsible, says he is prepared to be convinced.

But this is not enough. Of YTS will be better if young people believe it takes account of their plans. It will be better still if it is recognized as one of a number of routes to jobs. The interests of economy will be best served if an individual can learn to plan his life through education and training.

For the careers service, the future is polytechnic, training, university, matching his capacities and inclinations to the available opportunities to the benefit of all concerned.

To exaggerate the benefits of career planning would be naive. But access to vocational guidance does not constitute social engineering. It is a prerequisite of the well-motivated work force necessary to a healthy economy.

So the careers service would not be the judges' on more than YTS. On behalf of their clients, careers officers would like some say in the administrative framework. While the MSC might offer superficial advantages, it could not counterbalance a service dedicated to the success of the economy through a range of individual initiatives, each taking account of the capacities and inclinations of the individual concerned. The MSC could provide a bludgeoning service but that is not what is required. But this year in the long run meet the needs of employers or potential employers.

So why should the careers service remain with the education authorities? Because future employment patterns will contain periods of work, training and education facilitated by accessible local sources of information, and advice for all those who need it, and at the very least for those who need it.

Personal career planning and development is an increasingly important and increasingly locally-based activity. Involvement in employment promotion, community programmes, self-employment and education require the co-ordinating which the careers service can provide.

The exploitation of TVEI, PCE, UP, Open Tec and many other initiatives require a central co-ordinating function. It is vital that careers education and schools, counselling in colleges and information for young adults remain a focus.

The time to review the functions of the careers service is overdue. It is within the ambit of the local authorities that the service will

David Pock
Mr Pock is Principal Careers Officer for Shropshire.

Entranced by spelling lessons

Continued from page 1

fixed the pupils together in small groups in his living room. He asked them out to tell their teachers or other pupils in case they got any special treatment at school.

He concentrated on ego-strengthening, promoting calmness and confidence, and on heightening the children's interest in their studies.

The doctor said the pupils were easy to hypnotize. At first he asked them to stare at a special "moving spiral" gadget, but later he was able to put them "under" by suggestion.

Then he would take the children together on a "journey" suggesting what the children saw and did. All the children "saw" their adventures vividly.

One journey was down a lift shaft in a subterranean network of caves — the Cave of Confidence, the Cave of Superpower Memory, the Cave of Knowledge and the Cave of Excelling at Sports among them.

The pupils "stopped" in each cave and the doctor asked them to explore. But when they compared notes afterwards each saw the caves in a different way. One pupil saw the Cave of Knowledge as a library, another as an empty room.

All the pupils thought their school work improved as a result of the weekly sessions, and were sorry when the doctor called off the experiment in June.

One pupil, 15-year-old Jen Worrall from Cheside High School, said: "Before hypnosis, I used to put my books down and wouldn't bother. Now it just seems natural to pick up a book."

"It taught me that there is a great deal for knowledge there in your mind. It's just a matter of making yourself listen," she says.

Mus Mounford, 16, from Painsley School, said his handwriting improved dramatically and he got better O level grades than he expected.

Another pupil, Darron Reynolds, 15, asked the doctor for help with his high jumping and went on to become a Shropshire schools champion. "I can't describe hypnosis but it just amazed me, and I wanted it. It's like a drug," he says.

Other benefits the pupils claimed ranged from overcoming shyness and conquering fear of the dark to developing a photographic memory for parts of a biology textbook.

Jobs threat

The spectre of compulsory redundancies is worrying teachers in Bradford as councilors decide whether to go ahead with plans to axe more than 300 teaching posts as part of a £9m saving on education spending next year.

Union leaders say the plan — outlined in a report to next week's education committee by education officials and calling for the full-time equivalent of 312 teaching posts to be axed — will mean up to 550 teachers will lose their jobs. This is because many of those who would go will be part-timers.

The announcement will come late in the afternoon, after the meeting of the board over the weekend. But papers from the NAB secretariat make it clear that the recommendation will be to give the lion's share to polytechnics in London and the Home Counties.

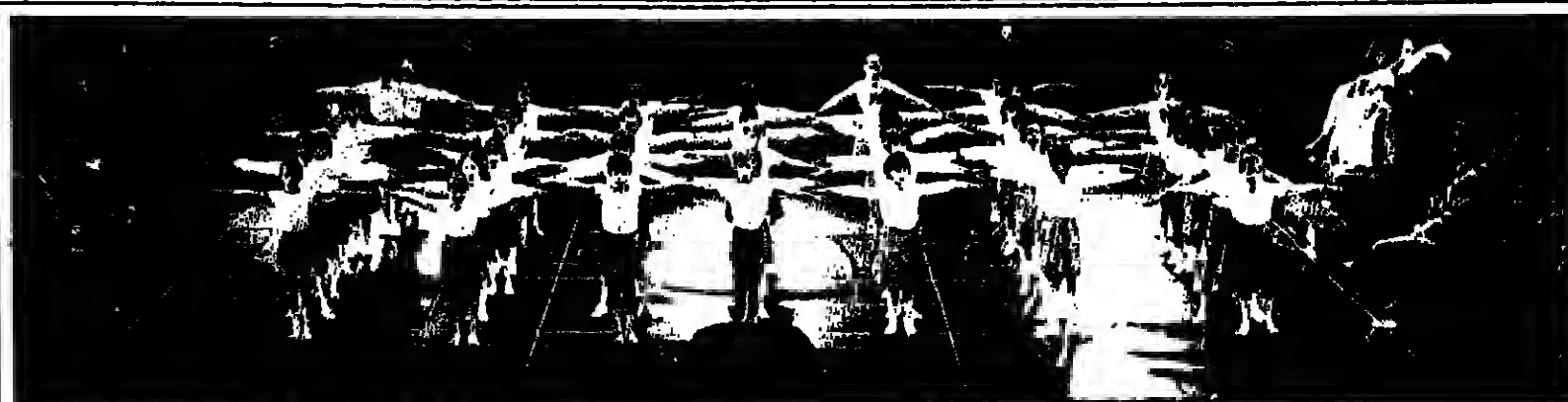
The loss of places in the south east is identified in the board papers as a major problem and also goes some way to easing the financial problems of polytechnics hard hit by the present recommendations.

It is now unlikely that final agreement will be reached on a funding system or on the detailed allocation of places over the weekend. But the main battle will be fought over funding and in particular over the Department of Education and Science proposal to base budgets on last year's allocation to protect the polytechnics.

College principals and the main lecturers' union have both signalled their vigorous opposition to the scheme. A statement from the National Association of Teachers in Further and Higher Education described the DES scheme as unacceptable and said it would simply shift the problem of under-funding from polytechnics to colleges.

The secretariat's proposals for student numbers have altered little as a result of the consultation which has taken place in the last month, despite criticisms from the Council for National Academic Awards and Her Majesty's Inspectorate. Mr John Bevan, the NAB secretary, in his introduction to the plan, warns that circumstances dictate that some courses must close even though there are no academic reasons to justify the decrease in enrolments. *THE*

NEWS



Wagnerian role: pupils from St. Mary's Church of England Junior school in Hornsey, North London, formed the display team in the English National Opera's new production of *Rienzi* at the London Coliseum

DES ponders directly-funded schools

by Biddy Passmore

The reintroduction of schools directly funded by the Government is the latest idea for extending parental choice now circulating within the Department of Education.

The scheme would be aimed particularly at inner city areas where the new schools could provide an alternative to comprehensives, especially where there were few or no grammar or assisted places schools. Because they would be directly funded, they could be imposed from the centre on hostile local education authorities.

The plan, described as "only a hypothetical sketch" this week, is set out in a paper by Mr Stuart Sexton, Sir Keith Joseph's political adviser. It was drawn up in consultation with Mr Bob Dunn, junior schools minister, and Mr Oliver Letwin, education adviser at 10 Downing Street.

Mr Sexton suggests that there may be a case for returning to the direct funding of schools by the DES which

ceased when the old direct grant scheme ended in 1976. (The assisted places scheme, which replaced it, finances selected pupils, not schools.) The schools that would receive cash from the Government would be new ones in old buildings: the paper acknowledges that, with so many schools closing, there is no need to plan expensive new buildings.

Secondary schools in the scheme would be selective, but not necessarily on purely academic grounds. Some might cater, for instance, for the technically or artistically able. At primary level, they might be small village schools that would otherwise have to close.

Their funds might come wholly from the DES or through a joint DES/local authority trust. Another possibility is direct funding from the Manpower Services Commission, which can set up and finance its own institutions. The schools would probably be free.

Mr Sexton suggests they might charge a "nominal fee" of between £20 and £30 a term to increase parental commitment. This idea is thought to stand no chance of acceptance within the DES.

Mr Sexton's paper is thought not to have been seen yet by the Education Secretary. It has been submitted as part of the current examination of ways of meeting the manifesto commitment to extend parental choice.

Any move to reintroduce grammar school education in Solihull will be delayed as a result of a rebellion by members of the council's ruling Conservative group, which broke into the open at a council meeting on Tuesday (Richard Garner writes).

Council voted in favour of a motion instructing Mr Colin Humphrey, the director of education, to prepare a report on bringing back selective education as part of a general improvement programme for schools. However,

they failed to set a deadline, with the result that it cannot be produced until December at the earliest. It had been planned to produce it by November.

More than 150 teachers, parents and sixth-formers staged a demonstration outside the meeting to protest at the plan. Inside, two senior Conservatives, Mr David Wynne Rees, the former leader of the council, and Mr George Hill, the chairman of the finance committee, spoke out against it.

As a result of Tuesday night's meeting, it will now not be possible to reintroduce selective education in the borough in 1984. During the meeting, councillors called for Mr Humphrey's report to look into the questions of fixed-term contracts for headteachers and how to dismiss "inefficient" teachers as well as agreeing in principle to the reintroduction of selective education.

ILEA fills equality post

The country's second equal opportunities adviser started work this term in the Inner London Education Authority.

Ms Carol Adams, aged 35, has been appointed by the ILEA to help develop equal opportunities for boys and girls in schools and to organize in-service training.

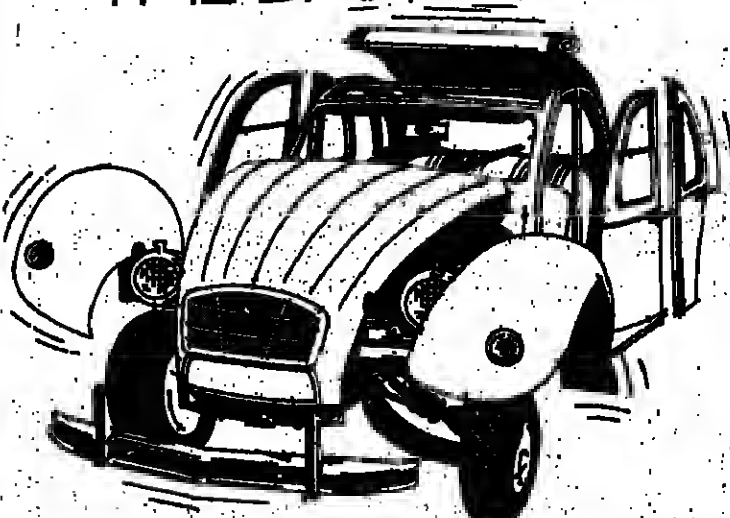
She was previously warden of the authority's history and social sciences teachers' centre, and has written a number of books on historical and

modern aspects of sex roles. Her latest, *Ordinary Lives*, is concerned with working class life in the last century.

The authority's equal opportunities policy is now at full staff strength. Mrs Sylvia Dorman took up her job as equal opportunities officer at the beginning of the summer, and Ms Jean Cousins, formerly of the National Council for Civil Liberties, has also joined the unit.

The first equal opportunities adviser was Ms Hazel Taylor, in Brent.

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PLATFORM

NEWS

We are all on the side of the angels and so, whether we are in education or industry, we genuflect to the idea of collaboration between the two. But it makes no difference. We continue to go our separate ways, sometimes in hostility and at others in mutual incomprehension. At best we sling a rope, or wooden structure across a deep divide resulting from the different cultures, values and ways of life.

That, at any rate, has been the situation so far. But last month saw the formal initiation of the Youth Training Scheme and it is a little difficult to see that divide persisting with industry and commerce operating explicitly as an element of the education system. Although the introduction of this new partner in education has been discussed very little, indeed some would prefer to limit the impact of YTS on industry as much as possible, the quality and value of the YTS offering to young people will depend very much on the degree to which industrial organizations accept their new educational and training responsibilities.

It is clear that great pressures are being exerted, perhaps most importantly by the Government, to distort the scheme to serve purposes having little to do with training and development, but it remains true that YTS represents an important potential breakthrough in education. For the first time the needs of early school-leavers have been recognized in a massive Government operation catering for about half a million youngsters at any given time. It necessarily caters predominantly for unemployed young people, since most school-leavers step off into unemployment, but the Government and MSC have formally accepted that the scheme "is about providing a permanent bridge between school and work. It is not about youth unemployment... we have not been concerned with temporary measures."

To say that the scheme is concerned to provide a permanent bridge between school and work is to conceive it as part of a continuing process of education in which YTS is a phase with work and the workplace as its main focus. Of course the off-the-job element of the programme, ie, the college component, is of vital importance but learning in work, that is where the headquarters of the YTS training year take place and where many of the skills and social relationships that will sustain the young people in adult life are acquired.

Even now, those who leave school at 16 and go into unskilled jobs for which they get no training do in fact continue their education at work, just as do

Morris Kaufman on why the YTS sets challenges which industry is not yet equipped to meet.

Goods that firms cannot deliver

these consigned to unemployment. But most of the lessons are harsh, negative and alienating, and the experience is often destructive.

That is why the entry of young people into the world of work must be consciously designed to provide a positive learning programme in which the experiences encountered and skills developed at work can be generalized by study and discussion at the college. While general and theoretical considerations presented at the latter can be seen and applied in a practical context, at work.

Such an integrated programme is essential for YTS, but obviously the primitive structures of collaboration built so far could not conceivably carry the busy traffic flow between education and industry in the implementation of a fruitful YTS operation.

Both sides will have to make considerable adjustments to their perceptions and philosophies, but industry and commerce will have to make provision in areas which have so far been alien to them. They will surely need the assistance of their sympathetic colleagues in education.

In April 1982, the MSC Youth Task Group Report, with the unanimous



agreement of its employer, trade union and educational constituents, set out the base for the YTS scheme. Although the MSC has been distancing itself from these recommendations, they still represent the minimum requirements for any serious education and training scheme. Some companies with a tradition of training and a sense of social responsibility will provide more. Others with an eye to the use of the scheme as a source of cheap labour will obviously try to get away with less, but one hopes that the MSC's own vetting mechanisms and the approval processes of the area manpower boards for individual schemes will weed them out.

In any event, the task group report requires "that training should be of a high quality, should last a year and include a minimum of three months off-the-job training and/or relevant further education". And that it will provide all young people participating in the scheme... (with) an integrated programme of training, education and work experience... which can serve as a foundation for subsequent employment or continued training and further education."

...the scheme should ultimately

cover all young people aged 16 and 17 who have left full-time education. The training should acquire defined core skills... (freedom) an introductory programme of training and skills related to a broad group (or family) of related occupations... increase his or her effectiveness... defined 'process' skills (eg, planning or diagnostic skills)... develop personal and life skills... receive organized appraisal, guidance and counselling, each person on the scheme should secure a record of achievement which must be recognized by employers and others and act as a foundation for progression to work, continued training or relevant further education."

...an essential part of the delivery in the new scheme will be in-service training, refresher training of supervisors, line managers and instructors, FE staff and other education and youth service tutors. Such training is vital because "quality assurance is a key to the success of the new scheme."

...we think it is essential that a specified organization should take responsibility for the complete programme for each individual trainee.

Whoever "takes responsibility for the complete programme", and it is

likely to be an industrial enterprise for Mode A and an educational institution for Mode B, will seek to win for a newly-made system that will deliver these goods. It does not yet exist. The objectives sought are quite real and they will demand resources which have not yet been developed. Nor will they be spontaneously generated.

Consider for a moment the implications for a company, and by extension some of the problems of a college concerned to do its best for students, the like of which it has never before entered for.

The company will have to make itself competent to plan, execute, monitor and assess a year's integrated training and education programme in association with an educational institution.

The programme will go beyond teaching the youngster how to operate the machine or service the immediate concern. It will, in fact, include matters which are apparent of no concern to the company.

The company will want to work with each youngster a suitable training programme and the system will ensure the accessibility of adults able and desirous of giving guidance and counsel to the trainee.

Even companies with highly developed apprentice training, with training centres and the rest, have never before addressed themselves to the needs described, and as a result they do not have the necessary organization or trained people. How do they ensure that every young person knows and feels that a symposium is available to oversee the programme and provide a pillar of support at difficult moments? Monitoring appraisal and reporting during the year of work experience and training, not as examinations for grading purposes, but as a means of developing assets of the youngster, how will this be made available?

At the very least it is going to add much time and as we know "time is money". No possibility then of doing all on the cheap or dismissing it as a casual comment about "costing it on overheads". But equally important is the explicit understanding that industry is now in the education business and that it will have to deploy its appropriate human and other resources in its activities. It will also add most in this process if it works in close and friendly partnership with the sectors of the education business.

Morris Kaufman was the chief industry adviser to the Rubber and Plastic Processing Industrial Training Board.

Northern boards loath to join profiles bandwaggon

by Nick Wood

Exam boards and education authorities in the north are standing back from the "bandwaggon" of graded tests and pupil profiles - now the subject of intensive development in London and Oxford.

Unlike the Inner London Education Authority and Oxfordshire - which in conjunction with their exam boards have separately announced ambitious plans to introduce records of achievement combining graded tests, profiles and exam results - northern officials have decided to conduct a detailed survey of teacher opinion before deciding whether to follow suit.

No general development plan will be initiated until the boards are satisfied that there is a clear demand from schools and colleges for new systems of assessment and certification... and some indications of the forms which teachers think they should take," says a discussion paper from the Northern Examining Association, an umbrella organization made up of the Joint Matriculation Board, the county's biggest GCE board, and four CSE boards stretching from Lancashire to Humberside.

Nevertheless, the northern boards are not completely convinced by the new moves. Five L.E.A.s - Gateshead, Manchester, Wigan, Wakefield and Bradford - are working with them on preliminary plans for a pilot scheme, but it is stressed, nothing will be decided until consultations are complete.

The paper strikes a generally cautionary note about the new forms of assessment. Graded tests, in particular, could prove counter-productive by further limiting the professional freedom of teachers, it warns.

Profiles, containing detailed accounts of the character and behaviour of children, run the risk of giving official endorsement to "biased subjective judgments", and are likely to make considerable demands on a school's manpower and resources.

A questionnaire accompanying the paper, both of which are being sent to all schools and colleges in the area, urges teachers to think long and hard about the implications of such

changes. Mr Colin Vickerman, the JMB secretary who outlined these issues to teachers attending the board's annual conference at the University of Lancaster last Saturday, told THE TES: "We're asking a lot of questions about this bandwaggon. We have the feeling that a lot of conclusions have been reached on the basis of very little evidence. Until consultation is complete, we'll be moving cautiously - there's no point in publicly committing ourselves to something that later proves unworkable."

At the conference, Mr Vickerman reviewed the Oxford proposals, saying that other boards had been shaken by the announcement of a full-blown certificate of educational achievement which would become available in four years' time.

But subsequently it had emerged that its scheme was "by no means cut and dried". Key questions, such as how and when exam results from other boards would be included in the Oxford Certificate and the precise content and scope of graded tests and profiles, remained unresolved.

"These are very critical questions and it is now clear Oxford do not claim to have the answers, but that, like many other people they are working hard on them."

Mr Vickerman also alluded to the far-reaching commercial implications of the Oxford and London schemes - a factor that is bound to weigh heavily with other boards which view with dismay the prospect of losing candidates and business to their trend-setting rivals.

Oxford had "triggered off a gold rush", he said. The discussion paper concentrates on the pitfalls of graded tests and makes only passing reference to their supposed benefits - better teaching and the improved motivation of youngsters.

"Graded tests could well determine the teaching of a subject to a greater extent than do present examinations," it says. "It is generally accepted that for a grade level to be meaningful it would be necessary to establish closely

defined criteria. It might be expected, therefore, that the criteria for the various grades in a subject would require a much more closely prescribed "syllabus" than existing GCE O level or CSE syllabuses. Further, the use of graded tests in a subject could determine not only what is taught but also the sequence in which it is taught. "One consequence of this loss of flexibility in the school curriculum might be that schools which practice mixed ability teaching would be forced to relinquish it."

The section on profiles sets out a host of key questions that need an answer before real progress can be made. Should the boards validate teachers' comments on pupils and, if so, what form of central monitoring should be used? Who are the profiles for and who will use them? Would employers regard them as useful for students who can in any case gain "good" examination results? Should profiles be restricted to weaker pupils?

Credit accumulation systems, in which courses are broken down into free-standing units of study, are also discussed. Successful completion of each unit would entitle youngsters to a credit, and once a prearranged number of these had been amassed, a certificate would be awarded.

The boards see undeniable benefits in such an approach. Short courses, more closely tailored to the needs of less able pupils, could be more readily provided, there would be more scope for skills-based and cross-curricular teaching.

But it would be more costly to operate than the existing exam system and make greater demands on teachers' time and energy. The danger of "superficial, fragmentary and unbalanced" courses is another drawback.

Entries for pilot joint 16-plus exams in the north jumped by 20 per cent this year, the conference heard. One in three of the subject entries with the JMB were for the pilot exams begun in 1974 - a proportion that is expected to rise sharply next year when (for the first time) they will be available throughout the northern region and the range of subjects will be widened.

Teachers pave way for talks on salary structure

by Richard Garner

Teachers' leaders have prepared the way for future discussions on a new salary structure which seemed in doubt when the employers demanded that the talks should cover both pay and conditions.

In a statement, the teachers' panel of the salary structure working party has agreed to the I.E.A.s idea of a special weekend session to discuss issues raised by the working party's review.

The panel has also passed a motion saying that the discussion of pay and conditions by two separate bodies - Burnham and CLEA/st - will not impede negotiations.

Mr David Hart, general secretary of the National Association of Head Teachers, said the panel's decision meant that the teachers were prepared

to discuss issues concerning both pay and conditions in the working party even though any recommendations arising might then have to be referred to CLEA/st for conditions of service issues and Burnham for pay.

Both sides are now hoping to arrange the residential weekend at a "neutral venue" - the NUT believes its education centre at Stoke Rochford could cope while the NAS/UTW could offer its centre at Rednal.

Meanwhile, discussion has been deferred on a paper tabled by the NUT on arranging induction courses for newly-qualified teachers. The local authorities say the issues raised - including a reduced teaching load for new teachers and proper in-service training facilities - could be discussed in the salary structure working party.

NUT warns parents of cuts threat to standards

Britain's biggest teachers' union is asking its members to distribute a leaflet to parents carrying warnings from the latest HMI report on the impact of cuts on children's educational opportunities.

The leaflet quotes from the report - published in July - which says: "The cumulative effects of financial constraints noted in previous reports still put at risk and in some cases undermine attempts to maintain standards."

It also carries warnings from the HMI report that children's educational opportunities are being damaged by lack of books and subjects being cut from the curriculum, from poorly maintained buildings and the growing dependence of schools on parental payments for basic materials and equipment.

Mr Fred Jarvis, NUT general secretary, said "Sir Keith Joseph, the Education Secretary, should be pleased that the NUT is telling parents what the HMI is saying is happening to our schools."

"In the measured but firm language of the Inspectorate, the statements are blunt, complete, hypothetical attempts to describe parents and the government's denial of resources to the schools."

"The Inspectors' report makes it absolutely clear that there can be no more cuts in education - our children's chances are already being damaged too much."

Call to review induction

Local authorities should be allocated a sum for each newly-qualified teacher they employ to help fund an induction programme for them, a conference of teacher trainers agreed last weekend.

But the teacher education section of the National Union of Teachers stopped short of calling for a national induction scheme which had been urged in a resolution from Mr Frank Harris, York University. Members at the annual meeting in Stoke Rochford called for a review of all schemes currently in operation.

"They also voted in favour of a specific grant from the Government to finance all in-service training instead of the present system which allows local authorities to spend as much or as little as they like on teachers' courses."

Mr Peter Griffin, vice-president of the NUT, was concerned at the degree of control now being exercised by Sir Keith Joseph, Education Secretary, over the education system.

Limits to what teachers could teach and which age group, refusal of automatic representation to teacher unions on the new examination body, and Sir Keith's keenness to link pay increases to assessment which would be "rigorous" were all indicative of his reluctant approach, he said.

Mr Richard Clark, county education officer for Hampshire, said that the quality of young teachers coming out of college was the highest he had ever known but "we are taking on a smaller proportion of them than ever before - and that worries me."

Mr Clark said he would be recommending the Hampshire authority to adopt a policy of admitting "new blood" into the county teaching force to get newly-qualified teachers into the schools.

Call for literacy teaching

College lecturers should learn how to teach literacy and numeracy to students on craft courses such as catering, dressmaking and construction, the Government-funded Adult Literacy and Basic Skills Unit says in a handbook published last week.

The unit says that literacy teaching as part of a course is far better than

referring a student to a specialist, as a clear link can be established between basic and vocational skills.

Teaching Literacy and Numeracy to Craft Students is available from ALBSU, Kingsbourne House, 229-231 High Holborn, London WC1V 7DA, £1.20 plus postage.

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Premature retirement scheme to be reviewed

by Richard Garner

A local education authority's ruling Labour group is seeking changes to its premature retirement scheme following a case in which a headmaster followed to go at the same time as he was taking on a full-time job with his union.

Labour councillors in Tameside, Greater Manchester, are planning to change the scheme to exclude those who have already secured other jobs. At present, any teacher or head in the borough above the age of 55 automatically qualifies for premature retirement as part of a drive to combat falling rolls and increase job opportunities for younger staff.

At the same time the authority reserves the right to refuse to employ any teachers who have received premature retirement compensation from any other L.E.A.

This move, which will be negotiated with unions over the next few weeks, follows the case of a 56-year-old primary school head who took premature retirement - which included a lump sum payment of around £5,000 and an annual pension of more than £5,000 - to coincide with his appointment as a national official of his union, the National Association of Head Teachers.

Mr Eric Pilkington, head of Corrie primary school in Denton, Tameside, until 15 September, said he approached the authority to take early retirement

no objections before putting in for premature retirement. He takes up a job as a professional adviser at the NAHT's headquarters in Haywards Heath, Sussex, in January.

Mr Pilkington said: "I have nothing to hide. If you are under the age of 55, your application has to be approved by the education committee but if you are over 55 you have to be of right. There was nothing untoward in what I did. I approached the education department first because I didn't want to be seen to be acting improperly in any way."

"I wouldn't have done it if there had been any objections. Had I taken early retirement and then gone into teaching again as a number of people have done, I could understand the authority being concerned about it."

"By going, though, I was opening up promotion opportunities in the profession with the possibility that somebody on the unemployment register could have been taken on lower down the scale. I was also going into a job in the private sector."

In a statement to the education committee, Mr Glyn Ford, the chairman, agreed that Mr Pilkington was acting "entirely properly" and within the council's current policy.

However, the council's ruling Labour group would now be reviewing its premature retirement policy.

Tax aid for parents of public school pupils urged

The Government should start now to pave the way for a full voucher scheme by introducing tax credits for parents with children at independent schools, according to the latest report from the Centre for Policy Studies.

Professor Anthony Flew, Executive Professor of Philosophy at Reading University, says tax credits would increase public spending because more parents would opt for independent schools and thus save the state the cost of educating their children.

The credit would be set at a proportion of the cost of educating a child in a state school. Tax-paying parents would be entitled to the amount while non-taxpayers would receive a cheque from the Inland Revenue.

Once a full voucher scheme is in place, he argues, it would be as simple to persuade our people to surrender their cash for vouchers as it is to persuade them to surrender their cash for their purses.

Power to the People by Anthony Flew, published by the Centre for Policy Studies, 8, Wilton Street, London SW1E 6PL, price £3 plus 50p p & p.

Government intentions unclear as adult education body bows out

Question of ACACE successor in doubt

by Diane Spencer

The Advisory Council for Adult and Continuing Education held its last council meeting this Wednesday. The Government has not yet indicated whether it will allocate funds for some of its work to be continued by the National Institute of Adult and Continuing Education.

But it is almost certain not to accept ACACE's demands for a national development body to be set up in its place.

To mark its demise the council published a report called "Six years of research, advice and encouragement: a record of progress in difficult times".

Mr Richard Hoggart, the council's chairman, in a personal statement, said the council had been "a body which had failed



Richard Hoggart

to persuade the Government of the value of adult education. The universities too had a "weak hold on the need for more continuing education" and most trade unions have done too little and on too narrow a front," he said.

But the vast majority of people did not regard adult education as a task; they still respected education as a task; the popular journalists and populist councilors who misread demand for continuing education is enormous."

The report pointed out that the council is still waiting for the Education Secretary's response to Continuing Education: from policies to practice which contained a blueprint

for adult education for the next 20 years. "This has been on his desk for 18 months," the report said. "Education for unemployed adults has been on his desk for a year."

The council doubts that it raised "the level of excitement about the education of adults," one of the objectives it was given when it was set up in 1977 by Mrs Shirley Williams, the then Education Secretary.

But ACACE claims it has raised the awareness of a large number of members of education committees and officers to the needs of adults. It says: "The fact that so many L.E.A.s although hard pressed to find the savings required of them in recent years have managed to preserve, and even in some cases extend, their adult education service may well be due to the influence exerted by the council."

Other signs of changing commitment to adults included policy statements by the TUC, the college lecturers' and university teachers' unions and three out of four major political parties.

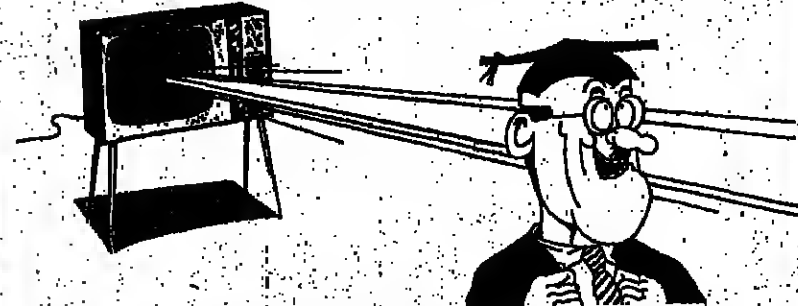
The re-grouping of continuing education functions under one Under-Secretary at the DES and working groups on continuing education being set up by the University Grants Committee and the National Advisory Body were also hailed as council successes.

The council has been trying to persuade the Government to establish a National Development Council since the beginning of the year. An announcement on a successor body was postponed because of the June election. Mr Peter Brooke, the education junior minister, is expected to tell Parliament of his decision in November.

Six years of research advice and encouragement is available from ACACE, 195-De Montfort Street, Leicester LE1 7QB, price £2.50 plus 50p p & p.

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Government proposes three years direct control on capital's education service

ILEA facing drastic cuts threat

by Biddy Passmore

The Education Secretary will be given an unprecedented power to control teacher numbers in a local education authority under plans for Inner London, unveiled by the Government last week.

The joint board of boroughs which is to replace the Inner London Education Authority in 1986 will be subject to a three-year regime of direct control by the Department of Education. Its rate precept - the amount of money the board will be able to demand from the boroughs - will be subject to approval by the Education Secretary, who will also "have power to specify levels of manpower or of manpower expenditure".

These plans were set out in the Government's White Paper on the abolition of the Greater London Council (of which ILEA is technically a special committee) and the six metropolitan counties.

They could herald draconian cuts in inner London's education service. The ILEA's current budget of some £870m is £350m above what the Government estimates it needs to provide a standard level of service and more than

£100m over its spending target.

The White Paper was instantly condemned by Mrs Frances Morrell, leader of the ILEA, who said Mrs Thatcher was demanding "dictatorial powers". "What on earth have Londoners done to deserve this blitz on their education service and democratic rights?" she asked.

And Professor David Smith, Conservative leader on the authority, said he was "deeply disappointed" that the Government had not been swayed by the arguments for a directly-elected authority.

His disappointment is widely shared within the DES, where direct elections had gained strong support during the summer. But a directly-elected body was vetoed by Mrs Thatcher herself at a meeting with Sir Keith Joseph, the Education Secretary, last month. She felt that direct elections would be more likely to produce a strong Labour majority than a joint board - and that there would be no pressure from the boroughs to hold it in check.

Whereas the present ILEA includes both GLC members and borough nominees, the new board will consist

entirely of nominated members of the 12 inner London boroughs and the City of London. Each borough's representation will reflect the size of its electorate and the political balance on its council.

The change of composition could mean substantially higher Conservative representation on the new board than on the existing authority. At present, ILEA has 34 Labour members, 11 Conservative, two SDP and one Independent. Rough calculations suggest that the joint board, which will have some 50 members, could have as many as 20 Conservatives, with 27 Labour and three Alliance representatives.

The new board will start up in May 1985, when the terms of office of present GLC members expire, and will come into full effect in April 1986.

But the new authority will remain on trial after that date, according to the White Paper. "The Government consider that a unitary education service, administered by a single education authority, offers at present the best prospect of meeting the educational needs of Inner London and improving

the standards and cost-effectiveness of the service", it says. Whether that prospect will in practice be realized depends upon the performance of the new single authority; and the Government therefore propose to make the authority subject to review in the light of experience.

The White Paper also suggests that ways might be found to increase the involvement of individual inner London boroughs in their education provision. Ministers are hoping to discover means of doing this during the four-month consultation period on the White Paper.

Inner London teachers are enlisting for time off to discuss the ILEA's new multi-ethnic initiative, under which all schools must produce a multi-ethnic statement and review their curriculum.

Mr Bernard Regan, executive member of the National Union of Teachers for Inner London, said the union very much welcomed the initiative and said it was, if anything, overdue. But teachers needed time off for day conferences so that it was "an organic development instead of something simply grafted on".

Progressives 'have best approach'

by Nick Wood

English graduates who approve of exams, and see themselves as having authority in the classroom, have the wrong attitudes for a career in teaching, staff at a leading university department of education have said.

Such students are less likely to be offered places on the department's postgraduate course in English teaching than progressives who dislike the "teacher as expert, teacher as examiner" role and make close personal relationships with their pupils their first priority.

The ideal applicant will regard English as a "major contributor to peace studies" and recognize that the concept of "standard English" has crucial political and social overtones because it "preserves forms of oppression" in society.

This rare and frank insight into how students are chosen for teaching jobs comes from the department of education at the University of Newcastle upon Tyne. Writing in the latest issue of the Teachers for Peace newsletter, Mr John Crompton, an English lecturer at the university, spells out the 10-point checklist he and Mr De Salter, his colleague, used to sift successful applicants from the 180 who applied for a place on the course.

Mr Crompton, a Quaker and a disenchanted member of CND - leaving because it has become too "reactive" - said the department was looking for people with qualities that included:

- Enough self-confidence to stand up to "cynicism, dubility and negative attitude of some of the teachers they will meet";
- Strong orientation towards education as concerned with personal development and relationships;
- An understanding of English as a "fluid, not a fixed, language" and "perceptions and an honest sharing of uncertainties";
- Opposition towards practices "millitating against the above such as streaming, conventional exams (O and A levels), the transmission model of teaching";
- Readiness to base teaching on an "honest appraisal of personal experience as pupil and teacher and careful consideration of research evidence", for instance that showing the "constructive productivity of grammar teaching".

"We believe that the kind of person who combines some or all of these characteristics will be an individual already predisposed to peace education, even though the above list was initially made to check positive signs of a potentially good teacher of English."

"Clearly, English as we conceive it is closely allied to peace education," Mr Crompton adds.

Mr Crompton later denied he was trying to make students "live the party line". Above all, he wanted graduates with a "vigorous outlook" and a lively interest in their subject and children. "I would rather have a floppy than a floppy."

But he deplored present exams because they tested only a candidate's memory and failed to assess whether he was "toughened" by the books he had studied. And he failed to see how anyone with supported exams, streaming and selection could combine those attitudes with a genuine respect for children.



Frank Dobson: "skinflint integration"

Labour Party Conference was told.

Mr Bob Warring, MP for Liverpool, West Derby, who is sponsoring a bill on anti-discrimination, said it was not good enough to educate and persuade people as the seat-belt law had proved.

"Discrimination against the disabled is as pernicious in our society as it is against women and blacks," he said.

"Skinflint integration" could mean some disabled children being worse off than being kept in special schools, said Mr Frank Dobson, MP for Hotham and St Pancras.

PM warned on pensions increase

The Prime Minister has been warned against attempting to increase the amount teachers contribute towards their pension fund.

Mr Nigel de Gruchy, deputy general secretary of the National Association of Schoolmasters/Union of Women Teachers, said that the last time the Government moved to raise the contributions made by teachers was during Mrs Thatcher's time as Education Secretary in 1972.

He said the contributions were raised from 6 per cent to 6 1/2 per cent in April. But that the Government had reversed its decision following opposition from teachers which had included a half-day strike and lobby of Parliament by NAS/UNT members.

Deadlock over lunch duties

Local education authorities may have to go it alone in an attempt to overcome the difficulties surrounding lunchtime supervision in schools.

Plans to set up a joint fact-finding mission between them and teachers' leaders floundered at last week's meeting of CLEA, which negotiates conditions of service.

joint mission should not consider the question of the "role and responsibility" of teachers of lunchtime. They were a declaration that supervision was voluntary should be inserted into the wording of a motion setting out the tasks of the mission.

The I.C.A. representatives could not accept this and it is thought they may now set up their own investigation.

Why handicapped need a new curriculum

by Diane Spencer

The curriculum for the handicapped child must be redesigned following the special education Act which came into force last April, an HM Inspector said this week.

Mr Freddie Green, staff inspector, said that the curriculum for handicapped children should be based on their needs, not on their disabilities, because the Act had abolished the 10 categories of handicap and replaced them with the concept of special educational needs.

He was speaking at the annual conference of the National Union of Teachers' special education section at Stoke Rochford, Lincolnshire.

The Department of Education and Science had updated its form for annual statistical returns on schools. From January, forms would ask special schools to give details of the complexities of handicap and to indicate which

type of curriculum they were offering, he said.

Curriculum types included: "mainstream plus support" for the average pupil who is physically handicapped in some way; a "modified curriculum" for pupils with some learning difficulties; and a "developmental curriculum" for severely retarded children.

An educational psychologist told teachers not to "retreat behind easy stereotypes".

Mrs Sheila Wolcott, a principal lecturer at North East London Polytechnic, spoke on parental involvement in special education. She said too many teachers hid behind the excuse that "parents don't care", or "they are not interested".

Parents should be encouraged to become partners in their child's education as most of them did care. "They are experts on their own children and



Mr Bert Meakin, chairman of the union's special education section

voiced concern about the amount of money being spent to implement the 1981 Act. In one authority, £80,000 out of an extra £150,000 allocated for special needs was being spent on bureaucrats, he said.

Legislation was necessary to prevent discrimination against disabled people, a fringe meeting organized by the Spastics Society at last week's



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Full-time students also follow two options from those listed above but not all options will be available in 1984-5.

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For further particulars please contact the Director of Advanced Studies, School of Education, University of Newcastle upon Tyne, NE1 7RU. Tel: Newcastle 326511. Ext. 2529.

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Simple animation is easy. The Colour LOGO turtle can be changed into a variety of different shapes. Thus, students can imaginatively create their

own animation simply by redefining the turtle's shape as it moves. They also can produce an unlimited number of designs - from simple to complex - by changing the turtle's movement and direction.

Powerful extensions. Colour LOGO features a "hatch" command which allows you to create multiple turtles

that are capable of running separate programs simultaneously. You can execute virtually any number of turtle graphics programs on all the same screen - a fascinating programming concept for students of all ages. This "multiple turtles" feature even makes it simple to create dynamic action games.

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The broad experience waiting to be noticed

When Sir Keith Joseph announced recently that the broadening of A levels is again on the agenda, weary eyes were raised to the ceiling in the London office of the International Baccalaureat Organization.

After all, they discussed broadening years ago. Then they actually implemented it. And now they have a good decade's experience of how it can work in practice.

But do they listen, these secretaries of state and national exam bodies? No, the feeling is, they do not.

Mr Robert Blackburn, deputy director-general of the IBO, remembers that a plan to introduce the IB into 30 British schools and colleges for a trial six years was scotched by the schools committee of the Schools Council three years ago.

Had this project gone ahead, he points out, there would now be considerable hard evidence to contribute to the present round of the broadening debate, and gathered at no very great cost either.

Now the IBO will be pressing hard for this pilot plan to be revived, although how the proposal will be received is not known.

While the diploma has some friends in high places, and committed supporters who are very committed indeed, it is still viewed with deep suspicion by some who see it as a funny foreign qualification suited only to the children of overseas diplomats and businessmen.

For those who have never come across it, the IB is a two-year sixth-form course, designed originally to meet the needs of international schools whose pupils needed a qualification that would cross national boundaries, but now used far more widely in establishments as far apart as tough American high schools and elite academies in the developing world. Last year 110 schools entered 4,376 candidates for the diploma.

For the full diploma pupils take

and second language, mathematics, one science subject, one arts subject, and one other.

How these subjects are combined is up to the individual. A scientist, for example, might choose to take maths, chemistry and biology or higher subjects, and English, French and economics as subsidaries, while an arts-orientated student might opt for En-

glish, German and social anthropology as main subjects, with maths, biology and art/design as subsidaries.

In addition, all pupils write an extended essay in one of their subjects, undertake a creative, aesthetic or social service activity, and study or

participate in a community service project. The scheme is too intensive, and suited only to that minority of students - the bright all-rounders. Some critics also allege that the content of certain higher subject courses such as physics lacks the depth of A levels.

However, advocates of the scheme point out that students can take any combination of subjects, without necessarily putting in for the full diploma. They were lyrical about the broad base of the scheme, which ensures a foundation of maths and language, science and arts, and about the enormous value of pulling everything together with the theory of knowledge course.

"It is, as it is familiarly known, is the cornerstone of the IB's attempt to offer a coherent and integrated education. It looks at language and logic, the formation of scientific concepts, the nature of historical knowledge, and how moral, aesthetic and political judgments can be made."

At Ingelstone Anglo-European School, in Essex, which offers sixth-formers a choice of A levels or the IB,

Mr Arthur Brierley, submaster, came after the ruling Labour group referred proposals to spend £40,500 on employing up to 26 foreign language assistants in the authority's secondary schools.

"This is a typical piece of short-sightedness on the part of the Labour group," Mr Steel said. "They are prepared to spend vast amounts of money on mother tongue teaching, which has no commercial application or relevance for the majority of people in this country. Yet, they deny the children of our borough an equal opportunity to perfect European languages, which have far greater relevance to our future."

An authority spokesman said the finance and building committee would consider the proposals in January.



Heads down... 'IB' students at West London College.

Hilary Wilce discusses the nature and status of that 'funny foreign' sixth-form diploma, the International Baccalaureat.

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this course is considered so successful that it has been made the basis of the sixth-form general studies course.

The school, founded specifically to offer a broad and European-orientated education, is the only state comprehensive in England and Wales to offer the full IB diploma. Last year

it took its first year of an upper sixth of about 70, most of them students with wide interests who were attracted to the idea of being able to continue both sciences and languages.

However, they are not all high achievers. "We've had students who we think might just have scraped two A levels who have got the IB diploma," Miss Judith O'Shea, senior mistress, says.

Neither do they form a small élite within the sixth form. "Perhaps they have less free time. They are in classes more and have their hands down more, but it is the only thing that distinguishes them."

In Britain the IB is now offered by about 15 schools and colleges. One particularly vigorous centre is Hammer Smith and West London College which has just over 140 students taking the diploma.

Some are mature students convinced by the IB's philosophy, some are bright students who lack expected O level qualifications, while others are the children of immigrants to Britain, from countries such as Spain, whose parents hope they will return to study

in the home country.

The college has just started offering economics and has, according to Mr Jim Wilham, head of the department of international education, "in very, very strong business studies option".

One great attraction of the IB is its flexibility in accommodating and developing new subjects. At Atlantic College in south Wales, which helped pioneer the IB, an enormous amount of work has gone into developing and trying out peace studies and minor biology as subject options.

Atlantic College is an international institution, like most schools which offer the IB. At the International School of London the head, Mr John Porges, a keen supporter of the system, says the diploma is just right for the needs and philosophy of his school, although he feels it would suit a much wider range of schools in Britain.

Among the diploma's plus points, he says, are its breadth, particularly in maths, the TK course, and the freedom to take unusual subjects in the sixth-subject slot. "These days there is a high probability that people will have to change their careers, so they need to go forward on a broad front."

He also feels it is easily adapted for a range of abilities. Some of his students are taking two higher subjects and four subsidaries, while in the past students with poor O levels have managed to get the diploma.

However, he acknowledges that the

IB is complex to timetable and expensive, both in staffing needs and in the level of fees which necessarily reflect the air tickets and postage costs of a worldwide organization.

At present participating schools pay an annual subscription of £2,200 plus £40 a head for each diploma candidate, a level of fees that seems guaranteed to deter hard-pressed state schools from experimenting with the diploma.

In fact there has been a levelling off of the numbers of IB candidates in this country, despite a 20 per cent annual growth rate around the world, and some institutions have dropped the diploma course altogether.

At Nelson and Colne College in Lancashire, the diploma founded from lack of interest.

"The schools were never terribly convinced of its value," says Mr Michael Leest, head of humanities at the college, "and in our rather parochial area the average student could not see any significant advantage to taking it."

Back at the IB's London office, Mr Blackburn thinks that the economic climate has been against schools experimenting with the IB. However, world-wide, interest is flourishing.

In the United States, where the number of non-English-speaking pupils is booming, many high schools are taking it up. The principal of a tough New York school recently told Mr Blackburn that he had programmes for the socially disadvantaged, the disabled, the ethnic minorities, "and until he started the IB he had nothing to offer his bright, older pupils."

In Europe, the Dutch, Swedish, Spanish and Norwegian Governments have all made a move towards offering the IB in selected schools, while enormous interest is being shown throughout the developing world.

"We fill a gap between the old cultural qualification and the new national qualification," Mr Blackburn notes. "Most countries still want to send their top-notch students to study in Europe - although not, alas, necessarily in Britain anymore - and we provide a qualification which is acceptable and universally recognized."

This recognition is widely offered by British universities, despite occasional hiccups with medical schools insisting on three sciences at A level.

A recent survey of attitudes turned up a few grudging comments - such as Jesus College, Cambridge, which said the IB did not provide enough specialization - but most have an open mind towards diploma candidates, and some are positively euphoric about them.

At a recent seminar on university entrance the admissions officer of Sussex University had a simple message for IB schools: "Send me all the students you've got". Perhaps even surprisingly, Bath University, with its strong technological bent, was also enthusiastic.

Once found, it seems, faith in the IB is strong. "It's something like 10 years," Mr Blackburn says, "no school which has abandoned its own national system for the IB has ever wanted to go back."

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IB is complex to timetable and expensive, both in staffing needs and in the level of fees which necessarily reflect the air tickets and postage costs of a worldwide organization.

At present participating schools pay an annual subscription of £2,200 plus £40 a head for each diploma candidate, a level of fees that seems guaranteed to deter hard-pressed state schools from experimenting with the diploma.

In fact there has been a levelling off of the numbers of IB candidates in this country, despite a 20 per cent annual growth rate around the world, and some institutions have dropped the diploma course altogether.

At Nelson and Colne College in Lancashire, the diploma founded from lack of interest.

"The schools were never terribly convinced of its value," says Mr Michael Leest, head of humanities at the college, "and in our rather parochial area the average student could not see any significant advantage to taking it."

Evidence has reached *The TES* of a new threat to free enterprise values in a sector of education which has until now been regarded as safe. While ministers concentrate on cleaning up polytechnics and the Youth Training Scheme, the rot is setting in among the infants.

It is understood that Her Majesty's Inspectorate is aware of the fundamental criticisms of the capitalist system of rewards that have been openly voiced by pupils of Farnbrook Infants School in Staffordshire and the implications for the future of work-related education for six-year-olds.

But so far it has offered no guidance to the school's teachers who, in turn, confess that neither they nor their advisors seconded from industry have been able to counter the challenge.

The situation has arisen from a pioneering move by Staffordshire's education department to try to extend industry education, already well established in its secondaries, to its primary schools.

Mr Gordon Vincent, in charge of the county's Schools Council industry project, persuaded two local factories to cooperate in a project which took over from the normal curriculum for the top infants for most of last year.

The idea got the strong backing of Mr Mike Rogers, Staffordshire's chief inspector, who was interested in the idea of combining secondary school work education with the role-playing used in primary schools.

The plan was that the class should study electric kettles, which are made in both factories, through every stage from their design to their eventual sale. The only opposition to the idea came from some of the parents, who initially suspected that the whole thing might turn out to be a public relations exercise for the companies and the management.

"They needn't have worried," says Mr Vincent. "You can't put anything across on six-year-olds." His experience with secondary pupils had done little to prepare him, in fact, for the searching questions which the children asked at every stage.

He added: "Unlike older pupils, they haven't yet learned to accept

without question the established ways of doing things."

Designers from the companies showed the children how various designs are modelled, and they carried out their own market research - asking relatives what kinds and shapes of

kettle they preferred, and testing out the performance of different models at a classroom tea party.

They visited the factories after a briefing on safety by electricity board officials. Then they set up two production lines in the school to make Lego vehicles. It was decided that assembly

kettles involved too many problems.

The pupils were divided into purchasing managers, responsible for keeping up the supply of Lego bits, production line workers, and quality control inspectors. They analysed their own performance, identifying hold-

ups due to inefficient purchasing, managers who needed to be replaced, or to slow production workers in need of more training.

The difficult questions arose when the pupils were introduced to the economics of the operation, getting a supply of counters as currency from which they paid themselves.

The pupils asked why the production workers had to work a lot harder than the inspectors, but got paid less. The managers had the least work, and the nicest job, so why did they get paid most?

Mrs Dorothy Hale, the head, says: "We couldn't think of a way of answering that one, and the two industrial managers seconded to us didn't seem to want to, either."

The pupils' disquiet about how the fruits of their Lego labour were being divided was reinforced when they switched from a time-based pay system to piece rates, and the production workers started earning more than their bosses.

"I gather a lot of them went home and told their parents how unfair they thought the whole system was," says Mrs Hale.

But she and the class teacher Mrs Shirley Fitzpatrick are pleased at the way the project provided a vehicle for teaching the whole curriculum. Maths and writing were inseparable parts of running the operation, creative work was done in preparing marketing material, including tie-dyed T-shirts which sold widely to the factory staff and which the companies snapped up for their real promotional activities.

Even music was taught through a specially-composed work song and RE through prayers for the success of the enterprise.

The school hopes to repeat the project so that it becomes a routine for the top class, and Staffordshire is hoping to set up similar projects in another 15 primary schools.

A report has been sent to the Department of Industry, which backs industry education development projects. But the report does not go out of its way to draw the department's attention to the children's awkward questions.



Assembly time at Farnbrook Infants school

Mark Jackson reports on industrial unrest among the country's youngest kettle makers

A little trouble at mill

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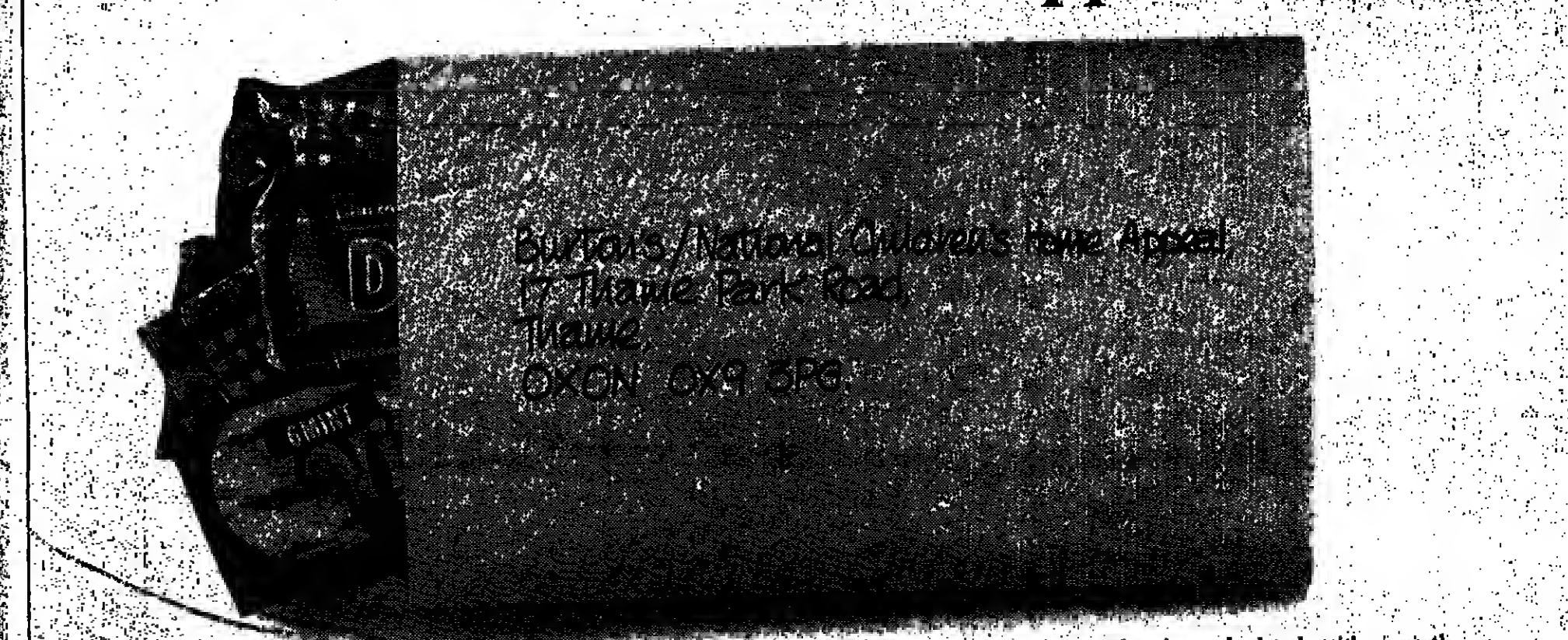
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Enquiries to: 01491 51111

UK/US SCHOOL EXCHANGE SCHEME

Enquiries are invited from teachers interested in forming a party of 10 pupils to visit an American high school at Easter for 4 weeks.

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Big rush for NUT women's courses

by Hilary Wilce

Women's training courses started on an experimental basis this year by the National Union of Teachers have proved so popular that steep competition is expected for places on next year's courses.

Two pilot courses have been held this year, in June and September. Fifty five women applied for the 20 places on the first course and 66 for the 20 places on the second. The courses included assertiveness training, training in communication skills and briefings on decision-making and union procedures.

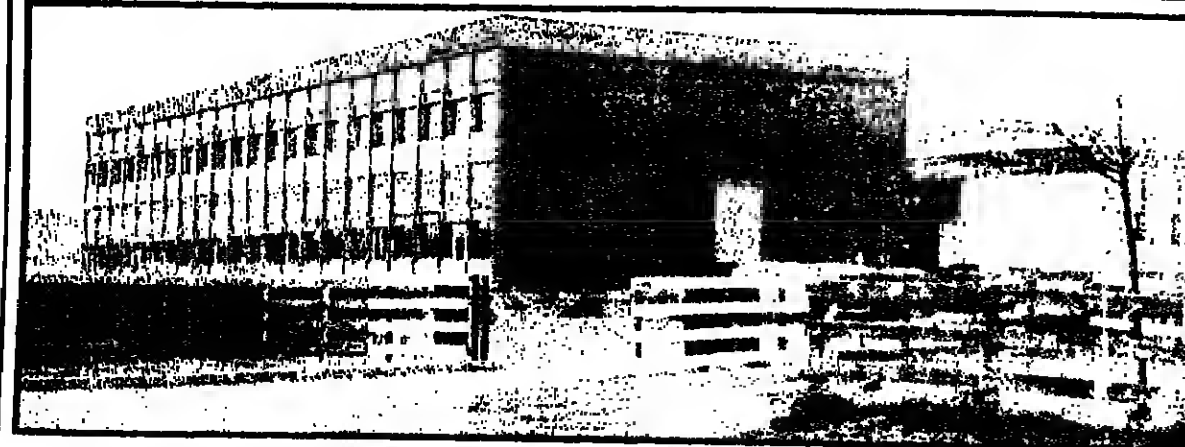
They were arranged following an NUT special delegate conference on equal opportunities last March at which demands were made for a training programme to help women play a fuller part in the union.

Three courses are now planned for next year and there would be more but for a full schedule at the NUT's conference centre at Stoke Rochford.

Ms Jean Farrell, the union's women's officer, said that selection of candidates would probably have to be made on the basis of geography, age, professional status and degree of union involvement.

It was also possible that the training programme might be expanded by organizing it at a regional level, she said.

Assertiveness training and management skill courses are also being offered to women education officers, and other women working in local government and the public services, through a series of courses being run at the School for Advanced Urban Studies.



Nick Wood reports on the row over a Cleveland comprehensive reprieved by the Education Secretary despite its projected falling roll

Sir Keith under attack for keeping school open

A local education authority is considering an unprecedented legal challenge against the decision by Sir Keith Joseph, the Education Secretary, to reject its proposal to close its smallest comprehensive school where numbers are plummeting over the next five years.

Angry councillors in Labour-controlled Cleveland have accused Sir Keith of "political nepotism" by ruling that Huntcliff, an 11 to 16 secondary school in Saltburn, must be kept open despite a projected fall in its roll from 450 to 300 pupils.

They point out that Mr Leon Brittan, the Home Secretary and formerly Chief Secretary to the Treasury, was MP for the area until the last election and that he actively supported parents and Tory councillors campaigning against Cleveland's plan to close the school.

Sir Keith's visit to Saltburn during the election campaign had also influ-



● Norma Wilburn ● Sir Maurice Sutherland ● Audrey Collins

enced his decision, Mrs Collins added. "I showed him round Saltburn and everywhere he went people were saying: 'Don't close that school'. They didn't mention unemployment or pensions - just the school."

Mrs Norma Wilburn, vice chairman of the schools subcommittee, attacked Sir Keith's decision at the latest meeting of the education committee, which voted to seek counsel's opinion on its legality.

"How they can speak of anything political in this is beyond my imagination because they have done nothing but look at this in a political way," Mrs Collins said. "Because we're a Conservative-controlled town, they thought we were easy prey."

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Satellite plan gets a two-stage boost

The University of Surrey is giving a two-stage boost to its unique satellite project, UOSAT, which has already brought space science into the classrooms of 200 schools.

This week a beginner's guide to the project, which began two years ago with the launch of UOSAT-1, the world's first talking satellite, was being sent to every school with a sixth form.

And, after a last-minute commission from America's National Aeronautics and Space Administration, a team of 20 scientists at the university are now working flat-out on a second satellite, again for amateur use, to meet a launch date of March 1985.

The guide describes the history of UOSAT-1, its orbital characteristics and its support, control and experimental equipment. Most important for schools, it explains how for the price of a £50 walkie-talkie set, youngsters can receive voice messages from the satellite and track its progress as it spins round the earth every 90 minutes.

Using just a VHF receiver and frequency meter, children can fix the satellite's position, plot its orbit and maintain the operational condition for its solar-powered batteries.

By picking up the radio signals sent by high-frequency beacons on the satellite, the project offers

Students warned over use of funds

The Attorney General has told student union leaders this week that they risk court proceedings if they break the charity laws and spend union funds wrongly.

In a letter of guidance sent to universities, polytechnics and colleges to be passed on to student unions, Sir Michael Havers says student union funds cannot be used for supporting political parties or campaigns for or against nuclear weapons.

It is also improper for them to support or oppose campaigns for the legalization of drugs, and just as wrong to use student funds in support of, or against industrial disputes, including hiring coaches to take students to a demonstration.

Student unions may spend money on political debate, but not on supporting political causes. But this does not stop students from collecting funds privately for supporting any cause they like.

Expenditure is "proper" if it is in the interest of students at their own college and improves their conditions.

The letter of guidance says complaints made in recent years over "contaminated" allegations of considerable expenditure on entertainment, nature

DISC circular on school closures advises authorities that 11 to 16 comprehensive schools with fewer than 100 pupils are unlikely to be saved. Huntcliff is projected to be down to two forms of entry by 1988.

"According to the principles stated by the Department of Education it cannot provide an effective solution for the children who will remain. Nevertheless, the Secretary of State has decreed it will remain open."

"The reason is quite clear. Saltburn has been a solidly Conservative area since time went and the Secretary of State must look after his own."

Mrs Collins disputed the authority's projections for Huntcliff. "The counsel's opinion is just a delaying tactic to frighten parents off. If they get off our backs, we will keep the school at 450 pupils."

"It gets outstanding exam results and because we're a small school teachers know every child and the problems at home. It suits this town and some people outside who don't want their children to go to a school with 1,300 pupils."

Sir Keith gave three reasons for rejecting Cleveland's proposal. Huntcliff enjoyed "very strong local support"; that at present it was "operating effectively"; and that, under authority's plan to merge it with Bydones School 2½ miles away, pupils would continue to be within some years.

Mrs Wilburn told the education committee meeting that all three were "totally irrelevant" under the terms of the circular.

"The Secretary of State has decided what he considers to be relevant circular 2/81. It did not contain references to political affiliations. It does tell us to disregard good educational practice. And it did not tell us to do only ineffective schools. (If it had) we would not have been able to do any."

Claiming that the authority was in a case in law against Sir Keith, quoted from a ruling in 1947 that relevant matters should be at the discretion of judgment.

Mr David Stevenson, assistant education officer for Cleveland, said that the Huntcliff decision plus Sir Keith's veto of a proposed school closure in Redcar would cost the authority £500,000.

"The extra cost of maintaining 11 surplus places, around £100,000, would push Cleveland beyond its limit and make it liable for penalties in its rate support grant."

A spokesman for the DES said Sir Keith had been aware of all the of the Huntcliff and Redcar proposals, including the charges of political motivation, when he made his decision. "There's no legal basis for an objection," he said.



L.e.a.s urged to introduce open enrolment schemes

More local education authorities should follow Kent's lead and introduce a policy of open enrolment to schools, Mr Bob Dunn, junior schools minister, told the conference.

The Government's commitment to widening parental choice was "total and absolute and not a matter for negotiation," he said, during a question and answer session which replaced the customary debate on education.

But he carefully avoided answering a question on how many L.e.a.s were planning to reintroduce selection.

And Sir Keith Joseph, the Education Secretary, made it plain that the initiative for change must come at local level. The decentralised system introduced by the 1944 Act might produce frustration and disappointment - such as the fast reduction in the number of grammar schools - "but we must reflect for ourselves the dangers of a centralized system."

The Education Secretary also reminded his audience that it was not possible to give parents a total choice of schools. "As you all know, some schools have a queue," he said, "and there is a limit to the extent to which schools can be expanded without endangering quality."

Biddy Passmore catches a rare sight of Sir Keith Joseph challenging some deeply-held Tory educational prejudices

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Another favourite theme on which Sir Keith ventured to challenge Tory prejudices was village schools. However cosy the village school, however loved the teacher, such schools were sometimes just too small to cater adequately for their pupils.

But the subject which generated most heat, improbably, was student unions. Questions raised the issues of "compulsory" membership, support for nefarious bodies like the IRA and the suppression of the Tory voice.

Sir Keith was unmoved. Students did not get "compulsory" membership but an "automatic access to facilities," the Attorney General had just issued guidance on union spending; and any student who knew of Tory members being denied a voice in their union should complain to their university or polytechnic. If that fails to produce remedial action, they should write to him. His address at the moment was the House of Commons, he added without a glimmer of a smile.

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In conference moods... Sir Keith Joseph at Blackpool

Sir Keith defends cuts in university spending

Sir Keith Joseph, the Education Secretary, was unrepentant about university cuts when he addressed a fringe meeting organized by the Federation of Conservative Students.

The universities had been "squeezed" after 25 years of headlong expansion, he said. He suspected that any by-product of the squeeze was the raising of entry standards.

The Government had the right to restrain the numbers going into universities and polytechnics because the taxpayer footed most of the bill. But he regretted the control he had to exercise from the centre and repeated his plan for institutions to "wean themselves" a little off the taxpayer by seeking alternative sources of money.

He was cautious, however, about a Government-backed loan scheme for students. "I for one don't want to embark on a very complex and costly scheme of government credit unless it becomes completely necessary for increasing access to higher education," he said. But there was no reason why loans from banks should not help "quite a considerable number of people".

Sir Keith rejected criticism that the Government had no long-term policy on higher education and refused to speculate about future cooperation between the University Grants Committee and the NAB. But he hoped the NAB would be an effective body with a future.

People like Mr Moss who said the legislation was unnecessary should go and ask the ratepayers of Sheffield or Manchester or Lambeth or Islington, he said. "Parliament has a duty to protect them from the oppressor."

The Environment Secretary also got away with a plain statement that rates would have to stay, despite the Conservatives' 1974 manifesto commitment to abolish them.

Despite Tuesday's easy ride, ministers are known to be nervous about how the rate-capping Bill will fare in Parliament, especially with the county councils' supporters in the Lords.

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From MSC dream to curriculum reality

The new technical and vocational education initiative for 14 to 18-year-olds was sprung on a surprised educational world last autumn by the Manpower Services Commission.

Although Sir Keith Joseph, the Education Secretary, was clearly involved in the plan to bring a more technical and career orientated curriculum into the classroom, neither teachers nor local authorities were consulted before the announcement.

Some Labour L.E.A.s denounced the scheme as creating an academic and technical divide in

schools. Most authorities showed interest, not least because of the large sums of money the MSC was offering to set the projects up.

Under the terms laid down each authority running a scheme had to satisfy the following criteria:

- 1 Girls and boys should normally be taught together and care should be taken to avoid discrimination and sex stereotyping;
- 2 Programmes should provide four-year curricula designed to prepare the pupil for particular aspects of employment and for adult life in a

changing society;

- 3 They should have clear objectives and encourage initiative and problem-solving ability;
- 4 They should have a general and a technical/vocational element but the balance can vary;
- 5 These elements should be broadly related to potential job opportunities;
- 6 Planned work experience should be an integral part from the age of 15;
- 7 Courses should be capable of being linked effectively with subsequent training/educational opportunities, and

8 There should be regular assessment and counselling with all students and their parents receiving periodic written assessments.

Pilot programmes started this term in Barnsley, Bradford, Croydon, Devon, Eastham, Bradford, Croydon, Devon, Eastham, Bradford and Worcester, Herefordshire, Shropshire, Shropshire, Staffordshire, Wigan and Walsley, Devon and Herefordshire - to see how fine words of the original submissions to the MSC are working out.

Signing on the dotted line...

DEVON

Devon is so determined that its 14-year-olds who choose TVEI will stick with it for the four years, that it wants to introduce a "quasi-legal document" for parents and children to sign, committing them to stay the course.

Though the planners ducked the issue this year - because it is inevitably controversial - it will receive high priority next year, according to Mr Geoffrey Philpotts, the project director.

Devon's scheme is based in Exeter's five secondary schools and tertiary college. In practice Mr Philpotts expects about 75 out of 250 to drop out at 16. But he sees this as an opportunity for children from outlying schools or local independent schools to have the second two years of the TVEI course in the college. No one would be stopped from leaving school after year one.

Though Gordon and Alison had rather different reasons for choosing the TVEI course at Vincent Thompson School, Exeter, neither seemed unduly worried by the fact that they had been fixed to make an irrevocable decision rather young.

"I was interested because it is about business and technology and you'll be fully qualified in four years," said Gordon, who has set his sights on a career in electronics. The more practical side of the course particularly appealed. Some of the teachers and his friends not on it had been sceptical to start with, but they were now jealous of all the new equipment.

Alison said she liked the prospect of going to college. She wanted to join the Army (or perhaps become a secret agent) and TVEI was a way of filling in the time until she was 17, and could apply to the Services. She especially liked the technology part of the course. The planners are quick to point out that a child choosing TVEI is not being asked to make a career decision at an unrealistically early age; on the contrary, highly developed careers guidance and work-related, and a scheme

that will ensure that every TVEI pupil is made aware of a diverse range of occupations, are an important element of the plan.

More importantly, the planners emphasize that TVEI will form no more than 30 per cent of the child's timetable in the two years at school. This will rise to 70 and 80 per cent in the two college years.

For most of the time the TVEI pupils will be part of normal school life, doing core subjects such as maths and English, according to Dr Roger Mylward, an education officer and one of the architects of the scheme. He said: "We do not want an elite group of children walking round with armbands saying 'We are the TVEI kids with all the money'."

The fact that TVEI forms only 30 per cent of the curriculum has been a strong selling point to the more able pupils. "A high-flier can still do five or six O levels as well as any qualifications they get through 'TVEI'," said Dr Mylward.

Through the beginning of term has seen some minor alterations in numbers, of the pupils on TVEI in Exeter there is slight bias towards the more able, with 24 per cent of the most able band, 62 per cent of the middle band, and 14 per cent of the bottom 20 per cent.

There is considerable variation between schools, however. St James's, a school with a highly enthusiastic head has 36 per cent high-fliers, while Priory has only 6 per cent. But all the schools complained that their recruitment was strongly affected by the fact that TVEI appeared after the children had already chosen their options for this year. By coincidence the split between boys and girls is almost equal (139 boys, 136 girls).

The Devon scheme is diverse, and allows individual heads considerable autonomy in how they put into effect the agreed guidelines on what the curriculum should contain and how it should be taught.

In the first year all pupils will cover three areas of learning: technology at work; the world of business; and personal and community studies. In the process they will have to undertake group assignments, a spell away from home, and visits to local employers. Throughout the scheme the accent will



Top pupils at St James High School take part in a structure load test and (above) at work on an oscilloscope and signal generator

be on problem-solving, rather than conventional teaching.

The scheme is actually not fully working yet. Though various new temporary classrooms have been built and huge quantities of hardware bought - ranging from computers, video-recorders and electronic typewriters to high grade sewing machines and draughting equipment - it will be some weeks before everything is in place. As a start most pupils are on an induction course, designed to teach basic skills, such as how to use a library, how to complete personal diaries that are an essential part of the scheme, and preparing them for flexible working hours.

At Vincent Thompson school, the 48 TVEI pupils have started their first assignment - in groups of 12 they are designing and making an educational game for seven-year-olds. Over about eight weeks they will be visiting their former primary schools to research their ideas, before building a prototype. The winning idea will be sent on to Waddington, the games manufacturers. The aim has been to provide a gentle introduction to project work in the community, to be used for more ambitious future tasks.

At the end of this month they will be going for two days to the Dartmoor Centre, and will complete their week's residential element near an industrial area next spring. One reason for this requirement is to permit counselling to take place under informal conditions.

TVEI pupils from St James' High School have already had a week near Plymouth, during which they were given financial and administrative control, organizing activities, deciding how much to spend on food, and doing all the cooking, cleaning, typing and tidying up. There were also visits to local factories, and an assignment to produce a brochure on the city, suitable for a foreigner.

Within the school their first assignment was also designed to be an easy introduction to this method of working - a study of seating round the school, how it was arranged, whether it met the need, what condition it was in. At a later stage they will be writing a booklet for middle schools on how to use computers, using the TVEI pupils to do some of the teaching.

In both schools the problem-solving approach is built firmly on the principle of fully mixed-ability groups.

thought it recognized there may be some separation in later years. "I must attain the maximum potential of each individual," said Mr Mylward. "There is no question of streaming. In the second year there is much more like an Open University course where pupils can opt in at a level appropriate to them."

Leading the curriculum development within each school is a Subject Teacher (collectively they make up the project team, along with an education officer, Mr Philpotts, and Dr Mylward). They have the backup of one Subject Teacher in each school, plus the subject teachers available as part-time advisers still to be appointed.

An important feature will be the links between schools that allow equipment, placed in one school, to be used by pupils from others; and the links between schools and the college. One reason Devon believes its application was successful was that it has a well established liaison between the institutions under the Education Council.

According to Mr Roy Pyke, deputy chief education officer, the two general worries - the fact the MSC has been slow in valuing the scheme (in Dr Professor Richard Pigg of Exeter university will be doing so on behalf of the authority), and the fact the attitude of the universities and boards is still unknown. They determined that TVEI should become a polytechnic route to higher education.

Though it is clear that curriculum varies among heads within the scheme there is obviously considerable pressure for what TVEI has already achieved simply in terms of stimulating ideas.

"The important thing is not that we've got a lot of money. That we have," said Mr John Weston, head of St James' High School. "What matters is the liberating effect it has had on the whole curriculum."

The speed at which TVEI has been put together has created problems, with complaints about lack of consultation and doubts from some governors about their say in the curriculum. The enthusiasm, however, has been weighed by the evidence that education can change.

"The money has been offered to us to prove what we can do," Mr Pyke. "It's a style of curriculum that's galvanizing. Whenever I'm sure it will be a permanent change across the whole system."

Dr Mylward agrees, saying: "The time will never be the same again if you compare TVEI with the rest of the system."

Barnsley unlikely choice for scheme

bring a completely new strand to the curriculum. Penistone Grammar School, for example, has started agriculture for the first time.

Mr Oddie defends the fact that the children will be restricted to one occupational area, on the grounds that the categories are broad and within any one, children should experience a wide range of vocational activities relevant to many careers outside the occupational area.

Practically it would be difficult to sell to parents of more able children the possibility of "master" courses in a much wider range of occupations. As it was, TVEI would only form 30 to 40 per cent of the timetable, and it might be possible for pupils to change to a different TVEI subject area at 16.

Unlike the other pilot projects Barnsley is not putting extra effort into career work. "We do not believe it would be necessary or morally acceptable to seek radically to improve the current arrangements for careers advice," the original submission states.

"We believe it to be a fundamental principle of our involvement in the scheme that it should not generate a more privileged minority group of pupils."

Choosing TVEI will simply be part of the normal options procedure and



Animal magic... the mini farm at Wombwell School

advice will be given by someone in the school familiar with TVEI.

Though the authority has no detailed figures on uptake, Mr Oddie is reasonably happy they have come close to their targets at 14, but have fallen well short at 16-plus where they had been planning to admit one group.

Nor is he confident that they have met MSC guidelines on the balance of sexes. Mr Joe MacRory, the project co-ordinator, said that it would be

wrong if they found that all the girls were choosing caring or office options, but it was difficult in an area like Barnsley "where sex-stereotyping starts in the cradle."

In their original negotiations with the MSC, Barnsley argued that it would be impossible to identify 250 children as TVEI and obtain a full ability range in the number of institutions taking part. Though the MSC is funding the scheme on a notional basis of 250 students, Barnsley expects to have rather more.

By the end there should be 34 extra teachers and 13 technicians taken on by TVEI. This year there are 13 more teachers and seven technicians divided between the institutions.

The extent to which some schools should continue to use visiting specialist lecturers from the college or technology to teach subjects like office skills remains under discussion, touching as it does a wider controversy about whether it makes sense for schools to try to develop their own specialist vocational departments.

One of the biggest tangible benefits the authority will receive is the equipping of a catering department at the college, which will start work next year. Also under consideration is the expansion of motor vehicle workshops at one school. Might it make more sense to improve the department at the college, where the equipment will be more intensively used?

Priory school is Barnsley's show-piece TVEI school, with an energetic head, Mr David Every, delighted with what it has done for his school, but with little enthusiasm for the consortium idea.

Priory certainly is unusual - the extra computers which all TVEI schools have been given to teach information technology has boosted his school total to 40, divided between two computer rooms. The school already gives the subject high priority,

many of the staff have been on in-service courses, and there are four full-time programmers on sandwich placements under a Local Government Training Board scheme.

Because Priory is specializing in technology, it has limited entry to TVEI to those doing maths and physics in the core - about half the year group of 180, but with relatively few girls.

As a result, they now have 14 high-fliers doing O level technology, seven middle band pupils doing TEC technician studies, five on a City and Guilds course, and 10 of the least able on a TRADEC course (a locally developed course for operatives), which gives 14 periods a week of hand skills.

"It is the first time in my teaching career that I've been able to take the last group so special," said Mr Every. The TRADEC course was the only real new departure for the school - it was already well down the vocational education path. But TVEI has added some important new hardware to the technology course.

To some extent TVEI at Priory is a matter of arbitrary labelling (though one distinctive feature is the use of profiling, counselling, and log books).

Information technology is a core subject for all third-year pupils, and in other technology classes TVEI and non-TVEI pupils work alongside each other. "I will not have a TVEI line in my school," Mr Every said.

He was not worried by the fact that children were having to make an important decision at 13 or 14. "I'd be worried if I thought the kids believed they were going for a technological career. I see TVEI as a way of motivating them. I would say the youngsters are quite excited about the curriculum and if that's the consequence of TVEI then I'm all for it."

At the opposite extreme from Priory is Wombwell School, which is specializing in agriculture and horticulture

for the good reason that it has had its own mini-farm for 20 years, raising pigs, sheep, cattle and poultry on a small scale.

According to Mr Fred Lane, the head, the main effect of TVEI will be that their environmental studies course will include the full ability range from next year. TVEI will also help buy extra greenhouses and a larger stock, though this is still to happen. Though the aim is to teach a range of transferable skills and a work ethic that will be relevant to any job, not just those related to agriculture and horticulture, it is clear that most of the curriculum development work has still to take place.

Mr MacRory, who only started as project co-ordinator in September, is convinced that TVEI should, and will, have a profound effect on the traditional school curriculum and values. But that there was little sign so far that anyone had really grasped how important it could be.

"The challenge TVEI presents is what do you do on Boxing Day with all the presents you got at Christmas? Throwing money about does not guarantee producing a new curriculum ethos in schools, where everything else has failed."

A lot of questions about the culture of schools and the hidden curriculum would be raised by TVEI. "I do believe it has the potency for change but it also has all the ingredients of past failures."



Dance time at the college of art and design

Taking the high-tech road to your job

HERTFORDSHIRE

Hertfordshire is determined there will be no window dressing in its project. Maths has not been renamed "numeracy skills" nor English "communications". If anything the reverse is true - they have deliberately disguised what they believe is a radical change in familiar, and hence more acceptable, clothing.

"Our scheme probably looks less radical in curricular terms than some others," said Dr Ron Wallace, the project co-ordinator. "It is adding six new options to our existing fourth and fifth-year options scheme, with consequential changes for the 16 to 18 curriculum. Its purpose is to increase the technological content of the curriculum but to keep it within a balanced general education, and more particularly to ensure the full cross-section of ability is covered including the ablest."

The scheme is based in all 10 secondary schools in Stevenage, one of the first London new towns, with a high proportion of high technology industries, such as British Aerospace and ICI.

Not surprisingly, perhaps, the Stevenage project is entirely technology-based. Pupils have to choose three TVEI options, from three pairs of (a) design and craft; modular technology; or (b) electronics, electronic instrumentation; and (c) information technology with office practice.

One advantage of being a fairly limited scheme is that it has made it easier to establish quickly (though one key feature - two specially equipped technology suites which will tour the schools - will not be ready until half term).

By concentrating on one area we are making it impossible for schools to drag their feet and say they don't want two computer rooms," said Dr Wallace. Because all schools are involved, there was no question of high or low status attached to TVEI schools. This was important in an age of parental

choice. Inevitably, some schools were further advanced with their teaching of technology and computer studies than others. Perhaps the biggest changes have been in the two girls' schools in the scheme.

Stevenage Girls' School, for example, has used TVEI money to equip two spare rooms for technology, and engineering design and craft, and electronic and electronic instrumentation courses. This equipment can now be used by all the girls in the school and "to this day TVEI has brought equality overnight."

Of the 305 pupils on TVEI this term (slightly more than the official target of 270), there is a good distribution of abilities, with a slight bias towards the more able in some schools. But there are only 122 girls. While the planners admit this is not satisfactory, they do see it as a considerable advance on the previous position when relatively few girls were doing technology.

Within Hertfordshire as a whole there is a tradition that even the bottom 40 per cent are entered for public exams, so that all the TVEI courses will be aimed at CSE or O levels (which will lead to RSA exams). Though special education pupils are not catered for at the moment, talks are in progress about how to include them.

One factor that Hertfordshire believes is in its favour is that the project co-ordinator, Dr Wallace, was until recently head of a Stevenage secondary school well (unlike his counterparts in Devon and Barnsley, for example, who both have a background in further education).

In the short term, mainly as a means of getting the scheme into quick operation, the scheme will be using both peripatetic teachers and equipment. Pupils are being taught in their own schools for the first two years, to some extent by existing staff, but mainly by a team of six specialists who will visit each school in two (and perhaps three) buses equipped with a computer network unit, an electronic office unit, and a technology unit.

As the buses are not yet ready the pupils travel to a disused primary school where some of the hardware has been installed.

It does mean that the touring experts have to teach the same lesson repeatedly but those involved claim that pupils from each school are so different that this is not a problem. They are also expected to spend time developing course materials.

The longer-term aim is to build up the amount of equipment in each school and the expertise of the normal staff to the point where the buses are no longer needed.

"I want the special nature of TVEI imposed from outside with specialist teaching coming to schools to disappear as soon as possible. Once it is established in the schools I'm sure it will survive," Dr Wallace said.

The aim is to give in-service training to as many staff as possible, partly in the subject matter (existing craft teachers need to know how to work the numerically-controlled machines that are being installed), and partly in new techniques of guidance and assessment.

The project is also encouraging involvement by local industry, and two firms IIT and British Aerospace have offered the help of five staff, two of them to spend some time on syllabus development. Employers will also be represented along with teachers and industry testing for those that worked, while another group was studying the behaviour of capacitors.

At the back of the classroom there was a large box of new items bought with TVEI money, ranging from oscilloscopes to soldering irons, and from electronic motors to switches.

One result of TVEI was that the school was having a complete review of all technical and vocational education from the first year onwards. Mr Walsh said that its presence had stimulated his staff into fresh thinking. There had been some resentment from staff in non-TVEI subjects, but he had pointed out that the funding meant that there would be more capitation money released for non-technical subjects.

The most immediate priority is to



Manufacturing technology at a Stevenage school

this week opened a new computer centre, designed for communal use. In a beginner's class, for example, 14-year-old boys and girls were sorting through a box of transistors donated by industry testing for those that worked, while another group was studying the behaviour of capacitors.

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fresh out the proposals for the curriculum after 16. Two years ago the Stevenage schools formed three consortia to help rationalize their post-16 teaching. These will form the basis for TVEI within schools, backed up by links with Stevenage colleges, and a further link with the local industry.

Throughout the emphasis will be on employability. Though unemployment in the town is considerable, heads are confident that TVEI will be a strong recommendation. "TVEI courses will not provide job-training in a narrow sense," Mr Walsh told his parents in an explanatory booklet. "They will provide a range of skills and experiences which have been chosen to fit in with the country's known manpower needs. They are related to job vacancies which are known to exist locally and which are forecast to exist both locally and nationally for many years."

Activity Centres

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Kent joins private list

by Richard Garner

Kent County Council this week joined the growing list of Conservative-controlled local education authorities planning to put their school cleaning services in the hands of private contractors.

The council's education committee voted on Monday to invite private firms to tender to carry out the work after being told that this could save more than £1m on the £6m wage bill for the cleaning service.

The education committee has agreed that residential special schools and small village schools could be exempted. Union leaders have been told that any alternative plan they put forward will be considered.

The education committee, which made its decision at the same time as the Adam Smith Institute, an independent right-wing "think-tank", published a report calling for a legal obligation on local authorities to seek private tenders for services such as school meals and cleaning, believes the cleaning service could be let to private hands by next September.

British child care record under fire

by Nick Wood



Lord Tony Pandy: shattered illusion

The National Children's Home, a charity that looks after young people, this week published a booklet bringing together a mass of statistics on the social circumstances of the nation's children.

Lord Tony Pandy, the new chairman and formerly Mr George Thomas, Speaker of the House of Commons, said the figures "shatter the illusion of Britain as a nation which loves children."

According to the latest estimates, there are 13.7 million children under the age of 18 in Britain. Of these, approximately 1 in 140 is in care for a variety of reasons including parental neglect or ill-treatment, homelessness or because they are guilty of an offence. One child in 1,400 is a home because he or she has been abandoned by his or her parents.

One child in eleven now comes from a broken home, and in 1980 in England and Wales 164,000, roughly 1 in 90, experienced the trauma of family breakdown resulting in divorce.

Crime rates are also high among the young. In 1981 in Britain, 230,000

children aged 10 to 17, whom 1 in 30, were prosecuted or given a formal warning by the police.

Children do not escape the effects of poverty. According to the latest figures, 1,750,000 children, nearly one in eight, are from families living on supplementary benefit.

Commenting on the figures, Dr Derek Steinberg, a consultant child psychiatrist at London's Maudsley Hospital, said that Britain's problem was that it failed to deliver a broadly uniform standard of care for young people.

In some parts of the country, facilities were very good; others, particularly the inner cities, were unable to cope with the "expanding" multiple deprivation — poverty, bad housing and schoolwork, crime and unemployment — that confronted children. In this respect Britain compared poorly with other developed countries.

But it was also true that more children were better looked after than at any other point in British history.

Lord Tony Pandy also described perinatal and infant mortality rates,

12.8 and 11.2 per 1,000 births in 1980 as high. His remarks brought criticism from Dr Tony Smith, deputy editor of the *British Medical Journal*.

Dr Smith pointed out that rates in Britain compared favourably with those in other Western European countries and that they had been on a downward trend since 1970. Because about 1,000 babies were born each minute, he said, the figures were not as alarming as they seemed.

"We couldn't have done much better, especially since the NHS has lost a few extra resources in the last few years," he said.

But it was a "scandal" that the rate for social class 5 was twice that of social class 1 and Lord Tony Pandy was right to draw attention to this fact, he added.

Children Today, available free from the National Children's Home, 2 Highbury Park, London N5 1UB.

Social class the main reason for staying-on rate variations

by Biddy Passmore

Social class and ethnic origin are the main factors explaining differences in staying-on rates, according to the latest research to emerge from the Department of Education.

Between 1978-79 and 1980-81, class explained more than 70 per cent of the variation between education authorities in the proportion of 16 to 19-year-olds taking full-time GCE or CSE courses at school or college.

But it had less effect on full-time participation rates for all types of course, where it accounted for some 60 per cent of the difference, and less still on study in schools alone, where it explained 55 per cent.

These figures are roughly the same as those found in an earlier DES survey covering the years 1976-77 to 1978-79.

Far less important than class, but still significant, was the proportion of non-white and non-British born young people in the area. This accounted for a further 5 to 10 per cent of the variation between councils in education participation by 16 to 19-year-olds.

When they analysed the results for 16-year-olds alone, the DES statisticians found the effect of the two factors was similar but slightly weaker, accounting for 10 per cent less of the differences between authorities.

Their summary emphasizes that the two main factors identified do not necessarily determine the participation rate; they may stand proxy for other factors such as parents' attitudes to education.

Once class and ethnic origin had been taken into account, the proportion of young people unemployed in the area had no statistically significant effect on participation. Nor had any other factor such as poor or crowded housing, or the proportion of one-parent families.

The study did not find that any factor explained inter-authority differences in participation in part-time study or full-time non-advanced study outside schools.

The more southerly the region, the more young people tend to take part in full-time education, the study shows, although the south-west was close to the national average (24 per cent). Other exceptions were the north-west, where participation was higher than in other northern regions, and East Anglia, where it was lower than in other nearby regions.

Participation in part-time courses followed the reverse pattern: higher in southerly regions (around 15 per cent) than in the south (10 per cent) although the figure for the suburban south-east was higher, at 12½ per cent.

The figures cover participation only in state education, so affluent authorities like Richmond in Greater London and Bedford in Bedfordshire may appear to have low participation rates because parents pay for private education, the statisticians explain.

Comparing their results with earlier findings summarized in a bulletin in 1979, the statisticians say the effect of the socio-economic factor remained largely consistent over the five-year period 1976 to 1981.

Unlike the last study, this bulletin includes an analysis of the 16-year-olds as well as the 16 to 19-year-olds. This found that class and the ethnic-minority factor appeared to make less difference at the age of 16, accounting for 10 per cent less of the variation between local education authorities. For example, in 1980-81, socio-economic class explained 65 per cent of the difference between 16-year-olds in the proportion of 16-year-olds taking GCE or CSE exams and this rose to 67 per cent if combined with the ethnic-minority factor.

Participation in Education by the 16 to 19 Age Group and its Association with the Socio-Economic Characteristics of an Area: Statistical Bulletin 1283, available from the Statistics Branch, DES, Elizabeth House, York Road, London SE1 7PH.

Social class, ethnic origin and full-time participation of 16 to 19 year olds in CSE and GCE courses in schools and colleges in English education authorities

	% Household heads in non-manual social classes (1971)	% Age 17 non-white and non-UK born	Percentage Participation rates		
			1978-79	1979-80	1980-81
North					
Cleveland	30.5	2.88	13.2	13.5	14.2
Cumbria	35.0	1.41	12.5	13.1	13.5
Durham	38.0	1.28	10.3	10.8	10.9
Northumberland	32.9	1.68	19.7	17.4	18.0
Greater London	30.3	2.11	11.5	11.8	12.3
Greater London	37.3	4.83	13.5	14.1	15.2
Greater London	35.9	2.25	17.8	18.4	18.4
Greater London	29.3	1.82	10.3	11.4	11.8
Greater London	24.3	2.13	10.3	10.7	11.3
Yorkshire & Humberside					
Humberside	33.5	1.78	12.8	13.1	13.1
North Yorkshire	42.9	3.27	14.8	14.7	15.2
North Yorkshire	20.7	1.78	8.4	10.3	10.1
Doncaster	35.2	3.14	16.1	14.0	13.8
Sheffield	25.8	2.87	12.9	13.3	13.9
Sheffield	31.0	6.33	13.3	12.8	13.0
Bradford	33.5	16.75	14.8	15.1	15.3
West Yorkshire	22.7	5.32	15.1	15.7	15.9
West Yorkshire	30.9	15.49	14.8	15.1	15.1
Leeds	37.1	9.27	15.5	16.4	16.8
Wakefield	28.0	2.08	11.9	11.1	11.2
North West					
Cheshire	39.5	3.07	16.7	18.2	19.5
Lancashire	37.0	6.84	18.7	16.8	17.7
Knowsley	28.2	1.90	11.8	11.3	11.4
Liverpool	32.5	3.49	14.2	14.8	14.7
St Helens	27.4	1.48	17.1	17.3	17.2
St Helens	49.1	2.17	21.2	22.2	23.2
St Helens	44.2	2.50	18.0	20.3	20.1
St Helens	32.2	10.46	15.3	15.4	15.1
St Helens	40.0	4.85	15.4	15.4	15.6
St Helens	32.9	15.88	14.0	13.7	14.1
St Helens	27.3	6.85	11.2	11.8	12.0
St Helens	31.0	7.15	15.5	14.4	14.7
St Helens	30.0	3.18	15.3	11.8	12.0
St Helens	48.1	3.37	22.2	20.7	21.7
St Helens	30.3	4.22	11.9	12.8	13.0
St Helens	53.4	7.65	22.3	22.0	22.4
St Helens	28.1	1.80	12.8	13.2	13.3
East Midlands					
Derbyshire	31.7	5.12	18.8	18.9	19.3
Derbyshire	34.5	13.08	17.2	17.3	18.0
Derbyshire	35.9	2.87	14.8	15.4	16.5
Derbyshire	32.9	5.89	14.7	14.3	15.1
Derbyshire	32.9	6.25	14.1	13.9	13.8
West Midlands					
Hereford & Worcester	40.3	3.17	15.8	15.8	16.7
Staffordshire	38.5	4.14	18.1	17.2	17.6
Staffordshire	32.5	7.17	13.3	13.8	14.8
Staffordshire	36.9	7.17	16.9	16.3	16.7
Staffordshire	32.9	22.76	17.0	18.7	17.0
Staffordshire	30.5	16.01	14.7	14.7	14.1
Staffordshire	32.2	5.88	14.0	14.8	15.4
Staffordshire	25.4	17.77	11.9	12.1	12.4
Staffordshire	43.1	4.11	17.9	19.5	18.8
Staffordshire	30.4	10.89	14.8	14.1	14.3
Staffordshire	30.8	25.70	17.8	16.3	17.8
East Anglia					
Cambridgeshire	40.9	7.24	18.1	15.4	16.5
Cambridgeshire	38.4	2.54	13.3	14.3	15.0
Cambridgeshire	35.9	6.80	12.0	12.5	12.7
Greater London					
Greater London	44.1	28.28	18.7	15.8	15.9
Greater London	28.1	6.88	10.5	10.2	10.9
Greater London	41.9	21.45	27.8	27.8	28.4
Greater London	48.3	8.01	22.0	21.7	22.0
Greater London	45.3	48.39	28.7	28.3	28.2
Greater London	51.4	7.54	26.7	26.5	24.5
Greater London	47.1	17.54	21.9	22.0	23.0
Greater London	47.1	39.00	21.9	22.1	21.8
Greater London	48.8	18.89	21.7	21.9	20.2
Greater London	43.0	41.81	22.4	24.4	26.3
Greater London	61.5	18.40	24.8	24.4	26.3
Greater London	45.9	3.80	17.8	17.9	18.4
Greater London	49.9	10.95	16.6	18.0	18.8
Greater London	47.0	23.12	22.2	22.6	21.1
Greater London	60.5	10.98	24.2	23.6	24.9
Greater London	51.8	20.43	22.4	24.0	23.5
Greater London	28.6	34.55	15.4	15.8	16.1
Greater London	54.3	19.83	22.5	22.1	22.1
Greater London	53.3	11.84	23.3	21.3	18.5
Greater London	57.3	6.33	21.2	21.8	22.8
Greater London	37.7	28.18	17.7	15.9	15.8
Other South-East					
Bedfordshire	32.9	11.30	15.8	18.8	17.1
Bedfordshire	49.9	9.08	18.8	18.9	18.8
Bedfordshire	49.8	7.62	20.8	18.1	18.5
Bedfordshire	61.8	3.76	17.0	18.1	18.5
Bedfordshire	45.9	3.48	17.3	17.8	18.4
Bedfordshire	43.3	4.27	18.5	17.0	17.8
Bedfordshire	60.2	5.78	22.2	23.0	23.5
Bedfordshire	49.9	4.73	18.1	18.1	18.1
Bedfordshire	44.5	6.87	16.4	18.9	18.8
Bedfordshire	58.3	5.38	22.4	22.5	22.5
Bedfordshire	53.9	3.70	18.1	20.3	21.4
South West					
Avon	44.5	5.03	19.0	15.7	16.7
Avon	35.3	3.17	17.3	17.3	18.0
Avon	42.8	4.16	15.8	15.8	16.8
Avon	47.7	4.18	15.5	17.1	17.1
Avon	40.5	2.15	14.1	16.3	16.3
Avon	37.8	6.51	16.4	14.9	15.2

Chambers to retire from NUT executive

by Richard Garner

Mr Jack Chambers, who once described himself as the "most left-wing President of the National Union of Teachers has ever had," has decided to quit the union's executive after 14 years' service.

Mr Chambers (pictured right), who was first elected to serve Hampshire and the Isle of Wight on the executive in 1969 and was union president last year, was one of the prime movers in the campaign to have discussions on disarmament pushed to the fore at NUT conferences.

He said he had decided to resign because his employers, Hampshire County Council, had raised objections to allowing both him and Ms Margaret Raff, his successor as executive member for the area once he moved on to presidential office, time off for union duties. Both teach in the same department at Regent's Park Secondary School in Southampton.

Mr Chambers, who is 61, added that his decision had also been prompted by criticism from "right-wing elements"



within the Hampshire association of the NUT. He said it would give him time to concentrate on his appointment to the area manpower board of the Manpower Services Commission and work with the City and Guilds Institute on developing the curriculum for the 17-plus.

His decision will also enable Ms Raff to stand for the Hampshire executive seat if she is unsuccessful in her attempt to become treasurer of the union in this autumn's elections.

One-third of the union's 42-member executive will not be seeking re-election next spring. Those standing down include at least three other former presidents of the union — Mr Jim Murphy, Mr John Gray, the retiring treasurer, and Mr Alf Budd.

ILEA class sizes drop

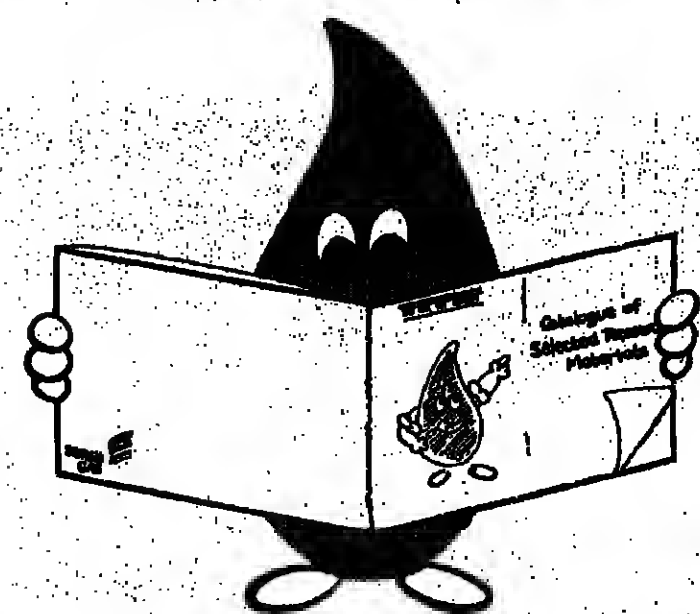
The average size of primary school classes in inner London, has dropped to 19.6 — a slight reduction over last year's figure of 19.8. In 1977 the figure was 22.1.

The number of classes with more than 30 pupils has also dropped — from 250 (3.7 per cent) in 1982 to 182 (2.8 per cent) in 1983. The smallest average

classes are in Wandsworth (18.7) and the largest in Greenwich (20.9).

Mr Barrie Stead, ILEA's schools sub-committee chairman, said the authority was giving priority to protecting the curriculum as primary schools got smaller, and had provided for 75 new staff posts this year.

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Yasmin Al-Daptary, aged 10, from Solihull



Peter Gutfreund, aged 16, from Bristol

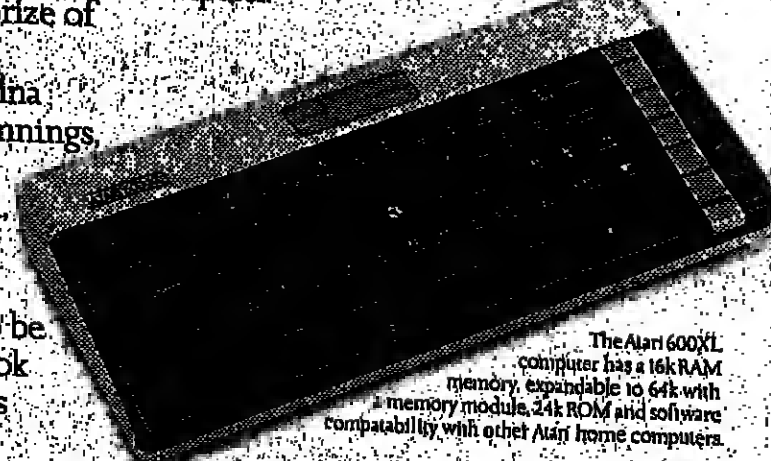
Yasmin Al-Daptary and Peter Gutfreund are the second winners in The Times Classroom Computer Competition. Both of them have won an Atari 600XL computer for their schools and an individual prize of The Times Atlas of World History.

The 8 runners-up — Mary Christina Paulson-Ellis, Dawn Goody, David Jennings, Timothy Golden, Martin Turnidge, Timothy Richardson, Jeremy Cielgard, and Julia Maddocks — have each won a copy of The Times Atlas.

There are still plenty of prizes to be won, over the next seven weeks, so look out for the start of next week's schools

competition in the Computer Horizons pages of The Times on Tuesday.

It could be your turn next to win a computer.



The Atari 600XL computer has a 16k RAM memory, expandable to 64k with a memory module, 24k ROM and software compatibility with other Atari home computers.

The Times puts computers into focus. 20p

New subjects pose threat to HE standards

The growing number of subjects and changing teaching methods are threatening standards in higher education, a minister claims.

Mr Peter Brooke, education junior minister, said this meant looking at teaching quality and making sure that courses stretch students and develop their abilities to the full. Acknowledged standards were needed in new subjects.

Mr Brooke was speaking at the recent conference of the Council of Validating Universities, which is responsible for course approval in the public sector of higher education.

He said: "We believe the maintenance and improvement of standards in all areas of education to be of the highest importance - the public, too, as parents and taxpayers are deeply interested."

"Validation has a central role to play as a quality control mechanism. It is not enough that standards should be high. We must have a nationally respected, objective and visible means of ensuring that they remain high."

"One problem is that things are moving so fast - new, more technologically oriented subjects, new teaching methods - so how do you know whether standards are being maintained or not, since you cannot compare like with like?"

Mr Brooke said there was a continuing need for methods to be reassessed so that they could maintain and



Peter Brooke... concern over the quality of teaching

improve standards.

He added: "The common flaw in current methods of validation is, perhaps, that the units involved are too dispersed and disaggregated for the results to be reliable. In higher education every institution sets its own syllabus, constructs its own course, devises its own methods of assessment and then, in the case of public sector institutions, puts forward its proposals for approval by a validating body."

While the HE sector had been expanding, the emphasis was on provision and approval of new courses. Now the focus had to be on adapting existing activities to meet new demands.

Sir Keith rules out environment education in training

by Bert Lodge

An appeal for environmental education to be included in student teachers' programmes has been rejected by Sir Keith Joseph, the Education Secretary.

His reply to the appeal from the National Association for Environmental Education was revealed last weekend at the annual conference in Doncaster of the National Association for Outdoor Education.

In his letter Sir Keith said: "It is my belief that the main concern of initial teacher training should be to equip students - especially those who are intending to teach in secondary schools - to teach a particular subject which is part of the 'mainstream' curriculum."

"In my view environmental education should be regarded not as a separate subject but as one of those topics of which all students should become aware as part of their general training."

Sir Keith's response made him the biggest enemy of environmental education, Mr Philip Neal, general secretary of the NAE, told the conference.

The other enemy was the head teacher, said Mr Neal, former head of a Birmingham comprehensive school but heads could be pressured into accepting the subject because many of them were looking for personal or institutional prestige.

Percentage of poly graduates out of work rises again

by Biddy Passmore

Unemployment among polytechnic graduates continued to rise last year, but more slowly, according to the latest figures from the Committee of Directors of Polytechnics.

Overall, the proportion of polytechnic graduates believed to be still without a job six months after graduation rose from 14.6 per cent in 1981 to 15.7 per cent in 1982, while the number of new graduates increased by 4.1 per cent.

The unemployment rate is still higher than for university graduates, 13.5 per cent of whom were believed to be still jobless at the end of last year. But the rate of increase has slowed down. Moreover, slightly more polytechnic graduates went straight into a permanent job in Britain last year (46.4 compared with 44.7 per cent), although the figure is still nothing like the level of 1979, when two thirds went into a permanent home job.

Subjects with the highest proportion of graduates going into permanent employment in Britain were those allied to health (91 per cent), catering and institutional management (83 per cent), surveying (82 per cent) and accountancy, banking and insurance (75 per cent). The figure for education graduates was only 62 per cent.

As in the universities, arts graduates found it hardest to get a job. In arts other than languages, only 29 per cent of last year's graduates had found a

permanent job in this country by Christmas and 27 per cent were unemployed. A further 11 per cent were in short-term employment and 53 per cent were taking further education or training.

In all, some 21,400 people left the polytechnics with first degrees last summer, of whom just over three quarters responded to the survey. Polytechnics' graduate output has risen by 79 per cent since 1976.

Some 5,200 higher diploma students left last year, of whom nearly 400 replied to the survey. Diploma holders had a lower unemployment rate than graduates (12.2 per cent) but slightly fewer (42 per cent) went straight into permanent job in Britain.

The survey covered students on both full-time and sandwich courses: 30 per cent of diploma holders had sandwich courses, which are more likely to lead to immediate employment. Among those who had taken time courses, the unemployment rate was 17.7 per cent for graduates and 13.7 per cent for diploma holders.

First Destinations of Polytechnic's denis Qualifying in 1982 available in £6.75 (including postage within UK from the Committee of Directors of Polytechnics, 309 Regent Street, London W1R 7PE.

SCHOOL TO WORK



Hilary Benn: criticized exam system



Ian Wilson: street violence warning

Labour delegates give grudging support to YTS

The Youth Training Scheme has crossed its last major political hurdle - the Labour Party's annual conference. The conference decided last week to pledge its reluctant support to the scheme.

Delegates were almost unanimous in condemning the Government's apparent determination to use the scheme to cut youth wages and to favour the employers at the expense of the trainees.

But they rejected demands from a passionate minority that they should denounce the scheme outright, and instead called on Labour teachers, councillors, and trade unionists to take an active part in running it and ensure that the interests of young people were protected.

The decision was of importance to the future of YTS, not so much because of its possible long-term political implications, but because an official proscription of the scheme would inhibit Labour local authorities and the affiliated trade unions. The TUC last month agreed to support the scheme on a trial basis, despite similar calls for its rejection.

The conference was impressed by a resolution from the Socialist Education Association - thought to be the longest ever passed - which criticized the YTS and also the Government's Technical and Vocational Education Initiative and set out in great detail a plan to put it right.

The SEA resolution committed the party to school curriculum for 16-19 which would be relevant to work in place of the "irrelevant" TVET, and proposed that local authorities should oversee all educational programmes for the 16-19, both in private industry and in the state sector.

Mr Graham Lane, the association's general secretary, told the conference: "The future for young people in this country is bleak so long as we have this unimaginative Government - YTS is an apology for a training scheme. But we have to use our influence to

develop good practice in education and training, and, when we form the Government, integrate it properly into our 16-19 policy."

The resolution committed the conference to a recognition that for most 16-year-olds the start of working life would be deferred for two years; but it did not prevent the delegates passing immediately afterwards another resolution calling for legislation to guarantee all school leavers a job.

Putting the case for outright rejection of the YTS, Mr John Ward, a local government officer from Durham, warned the conference: "Maggie's goats are not going to allow any tinkering with their plans." The Commission's chairman, he alleged, had already overruled area manpower boards, and managing agents were being told to discourage union involvement.

But a delegate from another local government union, Mrs Saxon Spence, of the National Union of Public Employees, appealed: "Don't turn your backs and resort to slogans. Check what is happening in your workplace and your area and challenge what is wrong."

And a staff shop steward from a YTS

scheme argued: "Pensions are disgracefully low, but I don't tell pensioners not to draw them and I won't tell youngsters not to join a YTS scheme."

A 17-year-old delegate from Scarborough, Mr Ian Wilson, who said he had been told he was the youngest at the conference (the claim was later challenged by a 16-year-old) said that Labour had to be involved in the YTS and win over the young. Only Labour could prevent them turning to street violence and persuade them to rely on parliamentary action. If they did take to the streets "they'll make Toxteth and Brixton look like a schoolyard scrap," he warned.

It was left to Mr Hilary Benn, an Ealing councillor, to try to relate the arguments about the YTS to mainstream education, as the SEA resolution had sought to do. "We will never see the type of education and training for the over-16s that we want until the present examination system is replaced by an approach which recognizes the efforts of every pupil instead of rejecting some as failures."

"It is not enough to point to 20 years of comprehensive reform when all we have done is to replace the 11-plus with a 14-plus. It is no wonder that by that age so many of them reject a system which has shown them to be wrong."

Mr Denis Howell, for the national executive, backed the SEA resolution as identifying the features of YTS which had to be fought and said it was the duty of the Labour movement to fight them. They could not do this by taking union representatives off the area boards.

In an unsuccessful attempt to prevent the conference committing itself to the open-ended promise of jobs for all leavers, he told the delegates: "That's an aspiration, not something we can guarantee. Young people want to be honest with them - they've had far too much deception from politicians - and we must not promise the youth of this country anything we can't deliver."

Inclusion only if he or she has failed to find other work or been found to be unsuitable for further education.

Each team will comprise 10 to 25 youngsters, working four-hour shifts with pay according to current public sector union rates (averaging just under £3 an hour).

Mark Jackson writes: Persistent attempts have been made in this country to persuade the Government to adopt community service as a main means of alleviating youth unemployment. But the proposals have been successfully opposed by the youth organizations, the unions and employers, and the local authorities. They argue that community service does little to prepare and train people to earn a living.

Edited by Mark Jackson

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NOTICEBOARD

ADMINISTRATIVE APPOINTMENTS

Seven new members have been appointed to the Advisory Committee on the Supply and Education of Teachers. They are Mrs Audrey Curtis, senior lecturer in child development, London University Institute of Education; Mrs Mary Hague, principal lecturer, Edge Hill College of Higher Education; Mr Michael Hines, headmaster, City of Portsmouth School for Boys; Mr Michael Power, deputy secretary, Cefholic

Education Council; Professor Ralph Schwarzenbar, professor of mathematics, University of Warwick; Mr Ronald Williams, chief adviser, Gwynedd County Council; and Mr Vaughan Williams, assistant director, Gwynedd County Council. Mr Fred Jarvis, general secretary of the National Union of Teachers, has been appointed chairman of the TUC's local government committee. COLLEGE APPOINTMENT: Mr Willem Blundell, head of the department of engineering and science at Dunstable College, Bedfordshire, to be vice-principal of the college from January 1, 1984.

SCHOOL APPOINTMENT: Mr Anthony Tuckwell, deputy head of Sale Grammar School, Cheshire, to be headmaster of King Edward VI Grammar School, Chalfont from January 1984.

CONFERENCES

NEXT MONTH November 9-10



Int'l national Schools Selling Association annual conference at the National Selling Centre, Arcliff Road, Cowley, Oxford. Details from the Conference Secretary at the National Selling Centre, Tel 0983 29494 1/2.

Thursday November 10 University of London Institute of Education one-day conference on Teaching and Learning in Art and Design: Current Research and Development in the United Kingdom to be held at the Institute, 20 Bedford Way, London WC1H 0AL. Further details from Marilyn Sherwood, Department of Art and Design, Institute of Education, Tel 01-636 1500 ext 243.

Friday 11 November NATHE Languages Section one day conference on New Directions for Language Courses at Mander Hall, NUT, Mableton Place, London WC2. Principal speakers include Professor Peter Stevens on Languages for Special Purposes, Tony Bell on New Developments in Institute of Linguists Examinations, Hazel Orchard on Developments in RSA Foreign Language Examinations and Julia Paine on Language Training Within Industry. Enquiries to Margaret Davine, Conference Organiser, 3 Hildgate Avenue, London N6 5RX.

Saturday November 19 The World Organisation for Early Childhood Education (OME) annual conference and AGM at the Royal Society of Medicine, Wimpole Street, London W1 from 9.45am to 4.30pm. The theme of this year's conference is Meeting the Challenges of a Multicultural Society. Details and application forms from Romy Fyfe, Continuing Education, Open University, PO Box 188, Betchley, MK3 6WV.

EVENTS

SPOD Autumn Courses Details of one-day courses on text education for mentally handicapped and physically

disabled young people to be held in November and December are now available from Francine Bethrand-Tilly, The Association to Aid the Sexual and Personal Relationships of the Disabled (SPOD), 285 Camden Road, London N7 8BJ. Tel: 01-607 8851 72.

October 20 "Catching up with AS Neill: Summerhill and Beyond" a seminar and discussion with Dora Russell, Leslie Norton, Edward Blahon and Jonathan Croft at 7.30pm in the Seminar Room, the Institute of Contemporary Arts, the Mall, London SW1. Tickets £1.40 bookable in advance (ICA Day Pass 50p).

November 3 "Revolution by Corset" Peter Newsom will give the North Westminster Annual Inner-City Education Lecture at 7pm in the Marylebone Lower House, Penfold Street, NW1. Details from the Lecture Secretary, Room 5, North Westminster Community School, Upper School, North Wharf Road, London W2.

The Natural History Museum has opened a Teachers' Centre offering information and ideas for teaching natural history whether in the Museum, the classroom or outdoors. For details of services offered to schools and courses contact the Visitor Resources Centre (TC), British Museum (Natural History), Cromwell Road, London SW7 5BD or call on Monday-Friday 11.30-2pm and Wednesday 4-5.30pm.

COMPETITIONS

Save the Children Fund third sponsored children's Scrabble Competition will be held at Sadler's Wells Theatre, London on Saturday November 19. For further details and entry forms please contact Catherine Yardley, 27 Lower Common South, London, SW16. Tel: 01-788 0603.

RECENT PUBLICATIONS

Access to Higher Education in Scotland: Robbins Twenty Years On a report on the Conference held at the University of Stirling in March this year is now available from the Information Office, the University of Stirling, Stirling FK9 4LA. Price £1.50. Actual Quarto, a new publication from Scotland, offers teachers of French a regular digest of news from the French press. Each issue takes a single subject and provides a

selection of clippings, proffering different viewpoints, and can be used as a starting point for a discussion of contemporary events. More details from Actual Quarto, Secret International, 8-200 Garpinnes, Belgium.

Living with Energy a booklet designed by the Loftham Energy Group explaining where energy comes from, what it supplies and what can be done to use it wisely is to be distributed to secondary schools in Britain. Further details on the booklet and the exhibition it is based on can be obtained from the Loftham Energy Group, 15 Buccleuch Place, Edinburgh EH8 9LX, or the Department of Energy, Distribution Unit, Room 1312, Thames House South, Millbank, London SW1P 4JL.

INFORMATION WANTED

Limericks E O Parroll is compiling the Pullin Book of Limericks and invites original contributions, particularly from children. Verses suitable for inclusion should be sent to him at PO Box No 389, St John's Wood, W8 3NL, London. If you wish the material to be returned, please stamp self-addressed postcard for acknowledgement of receipt of the material would also be appreciated.

Assessment Mrs V N Fitzhugh is researching into the use of the Criterion Referenced Assessment Technique in reading with secondary aged pupils. She would be interested to hear from other teachers using this method of assessment and may be contacted at St. Peris School, Grange Road, Leicester. Mother Tongues of Linguistic Minorities M. Phil research student at Bradford University would like to hear from readers with educational experience in this field. Please contact Gurpreet Singh at 5 Alorington Avenue, Stretford, Fields, Derby DE2 3BP.

Activity Centres

TY ISAF ACTIVITY CENTRE Ideally situated in the Dorset Downs, this centre offers a wide range of outdoor activities for schools and clubs. Activities include: canoeing, sailing, rowing, swimming, tennis, badminton, table tennis, basketball, volleyball, football, and many more. For further details and booking forms, please contact: TY ISAF Activity Centre, Dorset Downs, Dorchester, Dorset DT1 1LJ. Tel: 01306 31111.

THE CLUB CRICKETER

was founded in the summer of '83 and has just brought out its last issue of the season - the Autumn issue. The publication has carried a wide variety of topics throughout the range of club cricket, in addition to match results and tables. It has published articles on youth and schools cricket and intends to broaden out in this field next year. Articles and statistics sent to the Editor will be very warmly welcomed, whether from teachers or students or other interested people. Complete sets of back copies exist and will be dispatched for £7.80 pp. And looking forward to next season, although a year's subscription is only £10 pp, you can take advantage of a special price of £8 if you send your subscription by 28th December 1983.

THE CLUB CRICKETER is about all aspects of club cricket and has been praised as being a most entertaining read.

LONDON HOUSE, 171-175 KING STREET HAMMERSMITH, LONDON W6 9LZ

notice

FIRST NATIONAL STUDY CONFERENCE Sheffield 28th-30th December 1983

Details from Conference Secretary, c/o ISTC, 43 Ashurst Road, Baffin, Herts. HG4 9LH



Saving face in job search

JAPAN

As competition for jobs mounts in Japan, graduates fear that their degrees have too little impact with prospective employers. Hoping that their face will be their fortune, some students have been visiting plastic surgeons before going for interviews.

One specialist hospital carried out cosmetic surgery on 5,000 students last year and expects the number to double this year, according to its deputy director. He added that students now account for 45 per cent of the hospital's patients, compared with only 15 per cent in 1972.

Another hospital claimed one in 10 of the students involved were men. Apparently, student

operations significantly increase when employment prospects are bleak. It happened in 1974, after the first oil crisis, and again in 1978, at the time of the second one.

An article in the Japanese magazine *Shukan Post*, said a survey of seven plastic surgery hospitals showed that women who receive operations to improve their appearance are recruited by leading private companies.

Although employers deny the assertion that looks count in an interview, some students are not taking any chances and intend to invest up to 400,000 yen (£1,150) in having their noses realigned and their eyes rounded.

Barbara Casassus

Taking the long course

WEST GERMANY

Caroline Cuss explains why universities are overcrowded

West Germany's universities are overcrowded more than ever, and the situation has been made worse by the lengthening of courses since the late 1970s.

A recent report by the University Information System (UIS) reveals that the average length of time spent at university has risen from just over six and a half years to just over six and three-quarters years.

The increase in the average length of courses is largely due to a change in the study habits of trainee teachers. The graduates took on average 9.3 semesters to complete their studies, compared with 8.6 semesters in 1974.

In the main, this is attributable to a considerable rise in the number of student teachers on the longer grammar school courses, and a corresponding reduction in the number on the shorter courses for primary and secondary modern school teachers.

But it is also well known that students who do not immediately find a job after their final exam may stay on for a second course.

Another problem which is causing some anxiety is the difficulty in assessing the responsibility of students between universities.

According to figures from the National Office for Statistics for 1982, 92.7 per cent of all university students passed their first final exam. However, pass rates were considerably lower for polytechnics and faculties, with 75.8 per cent of law students passing while the success rate among student teachers for primary and secondary modern schools was 95.2 per cent.

Grammar school teachers did slightly less well, only 90.5 per cent of those passed.

Herr Hans Schlier, Minister of Science in Northrhine-Westphalia, is concerned about the high incidence of good results in his *Land*, and has commissioned an inquiry into marking patterns.

Czech minister

Mr Milan Vondruška is the Czech Minister of Education in Czechoslovakia, but the federal Czechoslovak Minister of Education, as reported in our issue of October 7.

473 students are likely to find employment at the end of their course, but some is true for most children leaving school.

The damage and looting of schools during the Israeli invasion, the occupation of the centre by the PLO and the subsequent killing of Israeli forces may draw attention away from the fundamental problems.

Yet staff are isolated from industrial and technical development in Lebanon and unable to obtain on-the-job training abroad, while the lack of modern equipment and courses is making the centre obsolete.

These reconstruction projects need to be tackled urgently. The PLO faces a perennial problem of raising \$16m (about £2m) of the \$207m it requires and 55 per cent of this budget was due to be spent on education.

Yet, whatever funds are available, Palestinian education in Lebanon is a crisis. Either the pattern of education could be changed, or the PLO faces a perennial problem of raising \$16m (about £2m) of the \$207m it requires and 55 per cent of this budget was due to be spent on education.

The result has been decreased demand for the services of trained Palestinians, while some states have felt threatened by the large presence of skilled Palestinians.

The problems of employment for people completing training courses are clearly illustrated by Siblin, a vocational training centre for Palestinian students.

A decade ago most students found jobs easily in the QLF, or as teachers in the UNRWA schools programme. More recently many were employed in technical jobs with the PLO in Lebanon. Today, few of the

Alan Phillips is deputy director of the British Refugee Council.

Teacher unions boost Mondale's presidential hopes

UNITED STATES

Peter David on why the teachers' associations are among the most powerful of the Democratic king-makers.

President Reagan's campaign to portray himself as the champion of educational reform does not appear to have impressed teachers.

The National Education Association, America's biggest teachers' union, announced last month that it would support former Democratic Vice-President Walter Mondale in the next election. And the AFL-CIO, the parent body of the American Federation of Teachers, has also announced its support of Mr Mondale.

President Reagan could never have harboured any hopes of winning the support of the NEA, which has been an implacable foe since the Administration came to power in 1980.

The teachers' union - with more than a million members, second in size only to the Teamsters - has fiercely opposed the President's plan to close down the newly created Department of Education and to give tax incentives to parents who send their children to private schools.

A sign of the stormy relations between the Administration and the union was that President Reagan, unlike the six Democratic contenders for the Presidency, did not bother to reply to a detailed questionnaire circulated by the NEA.



Walter Mondale (left) and Jimmy Carter both have reason to be grateful to the NEA.

Schools refuse to submit reports on asbestos danger

The huge cost of removing asbestos from educational buildings is causing many school districts to refuse to comply with a federal law compelling them to report on the quantities of asbestos in their institutions, according to an internal Department of Education report leaked in *The New York Times* last week.

The report estimates it will cost an average of \$100,000 to remove potentially dangerous asbestos from schools, leaving the national bill to about \$14,000. Under present legislation, however, the Federal Government does not have to pick up the tab and many states and school districts cannot afford to carry out the work.

According to the Environmental Protection Agency, well over half the nation's schools - public as well as private - have failed to inform parents about asbestos hazards in their buildings.

In a first step to muster some federal dollars for the removal of asbestos, the House of Representatives called recently for the creation of a \$50m fund for low-cost loans to districts which needed money to remove asbestos. A similar measure will have to be approved by the Senate before it can be implemented.

At present the only law on the statute books regarding the problem is the 1980 Asbestos School Hazard Detection and Control Act. The Act does not require schools to remove asbestos, but asks them to inspect for the presence of crumbling asbestos and announce whether any has been found. It is a voluntary scheme, commonly used for insulation of pipes and ceilings, which releases fibres that can be breathed in and remain in the lungs.

The counter HE revolution

Too much concentration on higher education has lowered the overall standard of Chinese schooling, according to education minister He Dong-chang.

Announcing reforms for China's middle schools, Mr He called on them to increase their efforts to train more students for employment rather than higher education. Schools should not be judged by how many students they send to university, he said.

Following the Cultural Revolution, when an estimated one million college graduates were "lost", the leadership stressed the need to build up the country's intellectual forces.

Key schools were established from nursery to university level, which received greater resources and were allocated the best teachers and brightest students. The aim was to produce graduates of high calibre who would then compete for scarce university places.

This will need to aim to bring Lebanese and Palestinian communities closer together, offer better opportunities for the whole community to every age group, and recognize that it may be many years before refugees return to Palestine.

Alan Phillips is deputy director of the British Refugee Council.

Ministries to develop high-tech faculties

ITALY

For the first time, future expansion of Italian universities will be governed by specific faculty development programmes. A new law, which opened 1,000 positions for full professors and 2,000 for associates, lays down rigid conditions for the distribution of these posts.

The legislation, a joint effort of the ministries of education and research, was passed this summer and now defines four levels of faculty development status: "static", "normal", "accelerated" and "forced".

The object is to inject the faculties the authorities want to expand - that is, the so-called "forced" faculties - with the most incentive by assigning them most of the new posts. At the same time they will be back assignments in faculties considered "static".

Some of the privileged faculties are electronics, energy technology and electronic engineering, the underprivileged are, for example, arts faculties and jurisprudence, both of which have experienced a drop in enrolment in recent years and which now carry the dreaded label of "static".

Italy's universities employ about 30,000 full and associate professors and the figure does not include the thousands of research professors, the first step in a university career. Nor does it include the many non-tenured positions covered by contract professors and lecturers.

This is not considered an unrealistic number when weighed against the annual enrolment rate of about 200,000 students in 1982 for all Italian universities.

In a country where university chairs and associate professorships are notoriously distributed according to patronage and privilege, the "static" label is a step towards some objective guidelines for the creation of new posts.

"The amazing thing," declared a Milan University professor "is that the concept of planned development has always existed in the text of university reforms in the past but it has never been spelled out and has, therefore, largely been ignored. This should also put an end to faculties where professors outnumber the students."

The new law will boost the career prospects of young researchers in scientific faculties. At the same time many talented professors in the so-called "static" faculties will see their careers come to a sudden standstill.

Likewise all Italian laws, however, this one contains a safety valve of sorts: the development programme is scheduled to come up for revision every two years.

Rita di Giuseppe

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The OECD points the way forward for the beleaguered universities of the 1980s

Excellence vies with equality

by Anne Corbett

Each year the higher education rate becomes more pronounced. Now each year the morale of the sector as a whole declines. Decreasing resources and public esteem, and increasing conflict with government, take their toll. It is a familiar English story.

It is also an international phenomenon, with some countries living much more openly with tension than Britain. The prospect of smaller 18-year-old age groups from 1985 adds to higher education's gloom.

This context has led the Organization for Economic Cooperation and Development to launch a major and informative study just published as *Policies for Higher Education in the 1980s* (OECD 1983). The report draws on an intergovernmental conference held in 1981 and comparative research. Its author: the OECD's resident higher education specialist, Dorota Furth.

It is a revealing commentary on the way the market has been operating as higher education policy-makers have been fumbling with issues of excellence and egalitarianism and role.

The last decade has been marked everywhere by a more diverse intake into higher education and more diverse patterns of study. Logically this would lead, as the author puts it, to higher education being "viewed less as the apex of a consecutive system of schooling and selection, more as an arena in which a diversity of groups, mainly for attention and resources".

In fact, economic crisis and increasing employment problems for graduates have kept an apex-dominated pattern in place, though some of its

constituents have been changing. Now that higher education of itself does not ensure access to the elite, students go for the safest options. Increasingly, these include selective vocational institutions which in the past have ranked below universities, and more professionally-oriented courses in universities themselves.

The pattern is more evident in continental Europe, where universities are less overtly selective, than in Britain. But the price to pay everywhere is high in terms of traditional studies in the humanities and pure sciences, and institutional vitality as schools and sectors of higher education gear themselves to the safe bets.

The OECD report advocates a gentler use of the strings which governments attach to higher education financing, more awareness of the effects of hidden forms of selection on secondary schools and higher education, and more efforts to prevent the obvious market-dominated polarization: between a small, youthful, elite full-time sector and a larger, older part-time sector.

By chance, the OECD report is complemented by a new French study which puts some of the conflicts into highly immediate terms, comparing the French system with the American, Russian and Polish versions (*L'enseignement supérieur et son efficacité*, Pascale Gruson and Janine Maréchal, 1983) and ending with the provocative thought that the strifeful Polish system is better adapted to the needs of the economy, and is more egalitarian than the French.

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Union loses test case over sacking

The Swedish Union of Teachers has lost an important test case in the Labour Court that could lead to a wave of sackings.

The union had contested the right of Ornskoldsvik, a municipality in the north of the country, to dismiss 15 teachers who were sacked in May because of falling rolls.

According to the Central Bureau of Statistics, 100,000 fewer children will enter primary school by 1988 due to the declining birthrate and 10,000 teaching positions could disappear as a result.

Swedish job security legislation rules that employers must have legitimate cause to sack workers, and with the strong trade union movement prepared to fight such cases, sackings have

been rare. The municipality lacked sufficient reasons for the dismissals because other municipal councils - especially those with non-socialist majorities - have been eagerly awaiting the court's finding. A wave of dismissals could follow, although the Labour Court stressed in its judgment that each future case would have to be tried on its merits.

Ornskoldsvik originally sacked 22 teachers, but seven were later reinstated after negotiations. The union had asked for a ruling that the remaining 15 teachers be reinstated and compensated.

Christopher Mosey

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The last decade has been marked everywhere by a more diverse intake into higher education and more diverse patterns of study. Logically this would lead, as the author puts it, to higher education being "viewed less as the apex of a consecutive system of schooling and selection, more as an arena in which a diversity of groups, mainly for attention and resources".

In fact, economic crisis and increasing employment problems for graduates have kept an apex-dominated pattern in place, though some of its

constituents have been changing. Now that higher education of itself does not ensure access to the elite, students go for the safest options. Increasingly, these include selective vocational institutions which in the past have ranked below universities, and more professionally-oriented courses in universities themselves.

The pattern is more evident in continental Europe, where universities are less overtly selective, than in Britain. But the price to pay everywhere is high in terms of traditional studies in the humanities and pure sciences, and institutional vitality as schools and sectors of higher education gear themselves to the safe bets.

The OECD report advocates a gentler use of the strings which governments attach to higher education financing, more awareness of the effects of hidden forms of selection on secondary schools and higher education, and more efforts to prevent the obvious market-dominated polarization: between a small, youthful, elite full-time sector and a larger, older part-time sector.

By chance, the OECD report is complemented by a new French study which puts some of the conflicts into highly immediate terms, comparing the French system with the American, Russian and Polish versions (*L'enseignement supérieur et son efficacité*, Pascale Gruson and Janine Maréchal, 1983) and ending with the provocative thought that the strifeful Polish system is better adapted to the needs of the economy, and is more egalitarian than the French.

Each year the higher education rate becomes more pronounced. Now each year the morale of the sector as a whole declines. Decreasing resources and public esteem, and increasing conflict with government, take their toll. It is a familiar English story.

It is also an international phenomenon, with some countries living much more openly with tension than Britain. The prospect of smaller 18-year-old age groups from 1985 adds to higher education's gloom.

Unity in the face of a political gag

Sir - I write with reference to your article "Antidotes to indoctrination" (TES, September 23).

At its annual conference (September 23-25), the Politics Association approved without dissent a resolution expressing concern at Ministerial intervention aimed at effectively excluding political education from the Youth Training Scheme. It is indeed rare for the association to make such a public stand and even rarer to find such a politically diverse group of teachers so united.

During the course of the weekend conference, concern was expressed over a number of recent developments which are likely to restrict the development of political education as a legitimate

component of the curriculum. Apart from the Ministerial intervention in the content of Youth Training Schemes, other areas of concern such as the intervention of Sir Keith in relation to the 16-plus criteria exercise cast a doubt in many minds of the support of Sir Keith for political education, a support which he has previously emphatically expressed to the association.

The Politics Association has for many years advocated the development of political literacy as the key to an effective political education. The allegation that this inappropriately involves "party politics" (as Mr Morrison so maintained in a BBC radio interview) is to misunderstand the

nature of the curriculum being advocated. If Mr Morrison believes that political education can be effective without dealing with political parties then many of us would be very interested to receive an elaboration of his ideas. Perhaps he also believes that history can be taught without dates or economics without unemployment.

The association, through its chairman, will be making representations to Sir Keith as a result of the concern expressed at the conference.

It is to be hoped that the Secretary of State, given his past support for political education, will endorse the views of the FEU and others that political education forms an important component of the social and life skills ele-

ments in YTS courses.

I conclude on a note of speculation. Were the present moves by Ministers to limit political education to have been instigated by Labour Ministers, might we not have seen a rather vengeful response by the press and the Conservative Party to the effect that Ministers were engaged in a form of censorship to further their own political dispositions? I think somehow we would!

RHYS EVANS
National Executive Member
The Politics Association
West Oxfordshire Technical College
Halloway Road
Witney
Oxon

Too defensive

Sir - As a sociologist and Conservative supporter, I should like to comment on the proposed censorship of the "world outside employment" theme to be included in the off-the-job training under the Youth Training Scheme (TES, September 16).

The suggested exclusion in the Manpower Services Commission draft memorandum of what is called "matters related to the organization and functioning of society" shows an unnecessary defensiveness and is likely to give rise to the suspicion that there is a great deal to hide. A knowledge of the social context of employment is a necessary part of education. To prohibit the dissemination of this knowledge is to perpetuate the very situation which has given rise to the traditional sneer, albeit a genteel prejudice, that technicians are unable to see how knowledge is interrelated.

An objective examination of "matters related to the organization and functioning of society" may well result in the perception of faults and inequities. But this is not something

which should alarm confident and reforming Conservatives. Indeed, a Government which enthusiastically supports information technology and is making every effort to usher in a computerized society of unimaginable affluence could be regarded as revolutionary.

Such sensitivity to possible criticism is inappropriate. The spectre of innumerable trainees being transformed into revolutionary socialists can only be described as ridiculous.

As the necessary steps can be taken to prevent political indoctrination, it follows that the exclusion of this educationally important area cannot be justified.

HUGO F READING
London N4

Letters for publication should be kept as brief as possible and typed on one side of the paper only. The Editor reserves the right to cut or amend them.



Solvents aid

Sir - I read with interest the article by Biddy Passmore (TES, September 23) assessing which line to take on glue sniffing, legal action or education and persuasion.

I have spent the past year at Newcastle University reading for a degree in counselling, working each Saturday at the Solvent Abuse Clinic run by Mr Denis O'Connor.

The team of counsellors involved provided a calm, empathetic and understanding response to the dozens of teenagers who attended - all on a

voluntary basis. Solvents were only the "presenting problem" and the counsellors encountered a multitude of personal crises.

Our success rate was high. Many of the youngsters came to terms with their problems and the sniffing stopped.

Sadly the clinic has had to close - not for a lack of clients, but due to a lack of university support.

ALISON FORTON
44 McCarthy Way
Finchampstead
Wokingham, Berkshire

Real intolerance

Sir - John Diamond's intemperate response (TES, September 16) to my article about contacts with Asian parents ("When East Is West") confirms my belief that those most committed to the bogus notions of "multicultural education" - and who constantly claim to be motivated by a desire for harmony - are, in reality, the most intolerant group in the education service.

He talks darkly of "phrases which might well give cause for concern". To whom? Mr Diamond? CRE? NAME? Star Chamber? The Supreme Soviet? He implies the article is fabricated. It purports to be objective and based on actual experience. It was "actual experience".

He also states that my relationships with my pupils and parents are informed by prejudice; and he seeks to deny me the right to publish in *The TES*. "Honeyford's article is awarded a status by *The TES*... It does not deserve 'Worst of all' in Mr Diamond's book. I suffer from being both 'English' and 'Indigenous' - to which, alas, I must plead guilty."

Mr Diamond's rantings are typical of what passes for civilized dialogue in the debate about multicultural schools. Many decent and tolerant teachers are afraid of expressing their views precisely because Mr Diamond and his supporters have managed to create an intellectual climate which makes dissent from the multicultural party line virtually impossible. They fear the effect on their reputations and professional futures.

I believe, since this is a free society, it should be possible to report on the complexities and problems of life in a multicultural school, without being accused of prejudice.

I leave your readers to decide where the real intolerance lies.
RAY HONEYFORD
14 Milton Road
Prestwich, Manchester

Science progress

Sir - We were interested to read the report of attempts to encourage girls to specialize in science and technology (TES, September 23). We were, however, concerned that the emphasis of the article was on initiatives which are expensive in time and money, for example, "Future Girls" or isolated and possibly contentious, such as Ellis Guildford School.

Since September, 1981, Tameside education authority has had two female secondary science teachers employed with the specific brief to "encourage interest and enthusiasm for the sciences among girls". We each teach half a weekly timetable of our subject and the rest of our time is available for developing the Girls and Science Initiative. This Tameside initiative is now into its third year. Our approach during this time has been to foster cooperation between ourselves, science teachers, careers teachers and careers officers in the L.E.A.

We have put the emphasis on what the classroom teachers can realistically achieve with a little backup support, given their lack of spare time and resources. It is at this level in a school that, we believe, the most sustainable changes can be made by the positive commitment of the teachers involved. It is they who are in a position to influence pupils on a daily basis, particularly over option choices and the interpretation of school policy.

Three schools in Tameside have operated single sex science teaching groups at various levels within the school and their experiences have convinced us that teachers should not be led to believe that this is the only approach. Such schemes are not without practical problems and can cause conflict between science staff and alienate other subject teachers.

Lastly we are concerned to hear of dramatic increases in the take-up of the physical sciences by girls, as we question whether this can be sustained and whether the full implications of this

Teaching the deaf

Sir - It would be a pity if September 30 were to give the impression that there are no fully qualified hearing-impaired teachers in the United Kingdom. In fact there are now more than 20 fully qualified hearing-impaired teachers in the United Kingdom, employed in a variety of schools, including mainstream schools, and in a variety of capacities, including as specialist teachers, as well as in a variety of other roles.

A few hearing-impaired teachers, gained by virtue of a university degree, have been trained by the DES in the normal way, and have gained considerable determination and energy in developing a course of study for the hearing-impaired, and in the regulation and teaching of the hearing-impaired.

Impaired student teachers should be allowed to undertake a course of study, although there is certainly room for flexibility on the part of the departments, the idea that there is a priority of esteem between the methods of qualification must be put full thinking in the light of history. A "different" certificate is indeed considered a qualification - to the detriment of hearing-impaired teachers and hearing-impaired students.

Flexibility on the part of training departments and the DES is required, specifically to enable student teachers to demonstrate their ability to teach all kinds of children. Most placements require students to teach a class of thirty children - not the same thing as teaching. One must while concession to hearing-impaired students would be to enable them demonstrate their skills in small teaching.

As a group, hearing-impaired teachers from England and Wales have recently drawn on their experience to produce advice for would-be hearing-impaired teachers. It should be pleased to forward a copy of the BDA's Education Officer, and put her in touch with those who have contributed to it.

PATRICIA NEVILLE
National Group of Hearing-impaired Teachers
281 Surbiton Hill Park
Surbiton, Surrey

Criticism unjust

Sir - We share the views expressed by other teachers' unions regarding the readiness of schools to take account of the multi-ethnic guidelines issued by Bradford (TES, September 23).

By blaming the teaching profession for the activities of the Muslim Parents' Association, Councillor Barry Thorne unhelpfully confirms the impression that local politicians have little understanding of the huge efforts schools are making to come to terms with the challenges posed by our modern multi-cultural society.

If each of the multiplicity of ethnic and religious groups currently flooding the education system needs sympathy and understanding, so do the teachers who are struggling to provide for them. It is worth pointing out that your own newspaper has published evidence that schools in Bradford are getting the balance right between Western and other cultures. We refer to the excellent letter from a Muslim pupil at Belle View Upper School expressing satisfaction with her programme (TES, June 10). Listening to those on the receiving end of education is to be encouraged.

SHELAGH PATRICK (Miss)
Chairman
Bradford Federation of the Professional Association of Teachers
MIRIAM THAIN (Mrs)
Secretary
Bradford Federation

The former is generated within the school by numerous organizational and interpersonal cues put there by experienced and knowledgeable staff. The latter arises from the existence of the segregated school system and is beyond the easy reach of teachers.

Teachers can, however, improve their own ability to meet their pupils' needs and reduce the numbers who are failing. Of course E241 students are not alone in attempting this but that 600 a year are doing so in this way is reason for a small cheer.

Integration is about changing normal schools so that they can meet the needs of an ever-widening diversity of pupils. It is not about "knocking down the special education sector" as Mr Simpson and I (with less distinction) have laboured.

Attitude change as a result of new learning and insight is part of the educational process. To dismiss a course as indoctrination because it contains uncomfortable notions is simply to expose one's prejudice.

As with other academic offerings of the Open University, this course presents along with the received wisdom, other viewpoints; in this instance the view, namely that the value of such so-called "training" in this country, was highly suspect.

As a manager in FE, responsible for appointing large numbers of teachers/lecturers in a score of separate labour markets, I should greatly regret the day when what passes for teacher-training to Britain today might become compulsory in FE, thus preventing my being in a position to attract able teachers (in terms of academic prowess and strength of personality) from such professions as fashion design, hotel management, etc.

When FE teachers establish courses (like the accountants, for example) where most of the able trainees who attempt to qualify, and despite hard work, fail, I shall probably modify my views in this area. In 30 years in FE I have failed to notice any positive correlation between holding a CertEd, BEd or PGCE and conspicuous success as a tutor.

B.R. GRACE
Principal
Barnfield College
Luton

Simple script
Sir - Although, as Rosemary Sassoon says (TES, September 23), the teaching of handwriting is the job of the primary or preparatory school, it comes to add to it - they rarely do "clean up" the convoluted forms that some unfortunate children have had to learn to write - so often in the name of "joined up" writing - by copperplate penmanship. The shapes of the engraver's blue-based stylebook have no relevance at all to the script of the pen, biro or fibre tip.

What makes for fluent, legibility? May I suggest, simple, unforced forms written with confidence and bound together by "easily achievable" (ie "natural") features, an awareness that clear handwriting occupies three spaces (height and regions of descent and ascender). The key insight

surely, is that the fluent and educated hand in Britain is rarely completely cursive. It is a progression of ligatures and short breaks or jumps. Let it be so, too, in schools.

Incidentally, anyone building on Marion Richardson's models cannot go far wrong - especially if they beat a hasty retreat to the advice: "Simplify, simplify!"

RODERICK THOMSON
14 Dove Street
Shipley
West Yorkshire

Handwriting November 1
I looked through the window and saw Susan's blonde hair made a gay flourish and it was not when it was finished and I looked at Gillian's oval Susan

Simplicity should be the aim

JEAN GIBBS
21 Fitzroy Road
Swindon SN1 4DU

OU not guilty of integrationist indoctrination

Sir - Phil Simpson's fears about over-hasty integration are well founded (TES, September 30).

All teachers in special schools must have seen children damaged by their experiences in "normal" schools and it is a major part of their task to enable pupils to rebuild their self-esteem. However, the two main components of a good special school's hidden curriculum work against each other.

The one that Mr Simpson identifies teaches pupils that somebody values them and cares about their problem; this facilitates learning, and could be part of any school's ethos. The message of the other component is that they have been rejected, are not quite normal and are apart from their peers; this may well do long term damage to their self-concept, and has no place in any school.

The former is generated within the school by numerous organizational and interpersonal cues put there by experienced and knowledgeable staff. The latter arises from the existence of the segregated school system and is beyond the easy reach of teachers.

Teachers can, however, improve their own ability to meet their pupils' needs and reduce the numbers who are failing. Of course E241 students are not alone in attempting this but that 600 a year are doing so in this way is reason for a small cheer.

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Simplicity should be the aim

JEAN GIBBS
21 Fitzroy Road
Swindon SN1 4DU

Backward step

Sir - As one who taught for nearly 20 years in boys' grammar schools, four of them as headmaster of a highly selective one, followed by 14 years as head of a comprehensive school, I can only express despair at Sir Keith's intention to re-introduce grammar schools.

The 11-plus examination selected the top quarter of the intelligence spectrum for an academic form of education in grammar schools but from my experience, this method was successful with approximately only two-thirds of them, and for two main reasons.

Firstly, not all highly intelligent people are academically inclined; a proportion of them are more interested, for example, in the practical applications of scientific knowledge rather than in pure science.

Secondly, the rigid streaming practised in grammar schools resulted in a psychological factor whereby those in the C or D stream, although not necessarily much less intelligent than the others, considerably under-achieved and became demoralized. It is interesting to speculate as to whether we might ever have had comprehensive schools had there been "mixed ability" teaching in grammar schools.

ROSS SHARROCK
Headmaster
King Edward VII School
Sheffield

Banded apart
Sir - The former headmistress of Kidbrooke School, Isobel Shepherdson, makes some interesting points to her defence of comprehensive schooling. She dislikes selection in any form and yet, have comprehensives abolished selection? Children are selected for entry to such schools by administrators - although there is much dispute (at least in County Durham) on how they should be selected. Is it by neighbourhood? Or attendance at feeder primary schools? Or what?

In comprehensives, most children are banded, set or streamed by at least the age of 13, and in some schools rather earlier. And there is evidence that teachers distinguish between the able, the average, and the less able within mixed ability classes.

BEVERLEY SHAW
School of Education
University of Durham

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TE1

REVIEW

EVERYONE'S OTHER COUNTRY

by
Naomi Lewis

The Oxford Book of Dreams. Chosen by Stephen Brook.
Oxford £8.95.

Waking from perhaps the twentieth dream of any night, what need (I tell myself) have I of Kafka, of fiction, drama, movies, the places and the plots? But in a moment all the scenes are gone, the absurd bizarre and dreadful, the poignant, haunting and exquisite; only a taste remains. Still, many less indolent dreamers have caught and held these happenings, in diaries, letters, autobiographies; literature itself is a mine of dream experience. Both kinds provide the sources of *The Oxford Book of Dreams*. Everyone's other country! What a land it is - the one place free to all sentient beings, animals too, where the dead live, the lame walk, and problems may be solved. But mischief makes the laws. You have no choice of gateway, road or company, of uttermost shame or uttermost ecstasy, nor can you find the same path twice, or leave by the way you came. But so boundless are its chances that the wonder is that a collection of this kind has been so rarely made.

unread *Ahlon Locke* is such a one. There is also a passage from that hauntingly dream-based novel, du Maurier's long-forgotten *Peter Ibbetson*. Contemporaries have a place: J.M. Coetzee, Nabokov, Julian Green, Doris Lessing. If nothing is here from the Scottish ballads, from Bierce ("An Occurrence at Owl Creek"), from Andersen ("The Snow Queen" is surely a misfit) from the poems of Edwin Muir, and from a handful of other superb dream-writers - well, all true anthology readers must be allowed their private lists.

Its literary emphasis, though, gives the book a more lasting quality than if it had centred on "dreams cited for purposes of clinical and theoretical interpretation in the psycho-analytical textbooks". These are not used at all. And after all, the biographical items here do carry their own content. Kate Greenaway has a terrible recurring dream of her much-loved father, Gazing into his face she sees that it is not his. Desperately she turns to the tale: "Only to be confronted by another and yet another, but never his own." Ruskin records what he calls "a most unusual form of unpleasant nightmare". "What was this?" he had asked himself (and with pleasure to the reader) "had I not dreamt of it, and of all the things I could not do which I had to keep, nor how to disengage the other two?" Cowper dreams of meeting Milton; he fulsomely praises the Master. "Woe, you for your part will do well also," says M with a charming smile. Dickens states that he never dreams of any of his characters. Hazlitt blackly explores the fact that while his days and years were obsessed by the face of a girl (see his *Liber Amoris*), she never entered his dreams. But Christina Rossetti, andly inhibited in life, had better luck in her other country.

In happy dreams your smile makes day of night.

The Oxford Book of Narrative Verse. Chosen and Edited by Inna and Peter O'S.
Oxford University Press £8.95.

1. *Wouldn't Have Missed It*. Selected Poems of Ogden Nash. Introduction by Anthony Burgess. Andre Deutsch £9.95.

The Penguin Book of American Verse. Edited by Geoffrey Moore.
Penguin Revised Edition £4.95.

Once upon a time, narrative verse was so popular that at the drop of a quotation any reasonably literate person could continue with a stanza or two and often did. It was commonplace to know the lines of "The Highwayman" by heart. "John" is a regular reading for Times crossword.

The latest of the OUP's anthologies is a book of the same kind.

In and out through the motley rout
That little jackdaw kept hopping about
Here and there
Like a dog in a fair

Over confetti and cakes
And dishes and plates
Came and went, and roared and fell
Miser and crozier! he hopped upon all

What an economical piece of scene-setting. Browning is equally dextrous.

Rabbi
They fought the dogs and killed the cats
And bit the babies in the cradles
And ate the cheese out of the yates
And licked the soup from the cooks' own
ladles
Spilt open the kegs of salted sprats,
And

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In happy dreams your smile makes day of night.

Learnt by heart

Bernadette Folliot on the long and short of it

Made neat inside men's Sunday hats,
And even spoiled the women's chats
By drowsing their speaking
With shrilling and squeaking

In fifty different sharps and flats.
Such favourites choose themselves. But there are 59 items from Chaucer to Auden, and there do not seem to be that number of good stories or of good narrative poems. One ballad can sound terribly like another, whether it is an anonymous original or a later imitation. Drayton's "Ballad of the Wild for France" is a marvellous first line to a disappointing patriotic anthem waiting for a tune.

Clarence in steel so bright
Though but a maiden knight
Yet in that furious fight
Searched such another!

What does seem to appeal, especially to younger readers, is bloodthirstiness. "Robin Hood", "Bath Gelert", "Sohrab and Rustum", "The Highwayman", "Lepanto", drip with gore, even though the excuse be pity and terror.

Softer emotions are also described at length, notably by Keats. In "The Eve of St. Agnes", a Romeo and Juliet with a happy ending. This poem inspired the dreadful all-purpose Holman Hunt on the dust jacket, which at first glance looks like Macbeth and his lady in the same mood, but the puff on the right is a white, not a black, unicorn, and what he is doing is a good

appearance with a characteristic episode from *Pandora Lost* in which Stn unlocks the gates of Hell and is unable to shut them.

On a sudden open fly
With impetuous recoil and jarring sound
The infernal doors, and on their hinges grate
Harsh thunder, that the lowest bottom shook
Of Erebus.

If parts of epic are to be allowed, then Byron would have benefited from this treatment: a chunk of *Childe Harold*. "There was a sound of revelry by night" perhaps - instead of Boppe.

Still, this is a generous collection of verses, representative of many ages, writers and styles. "The Lion and Albert", written for Stanley Holloway, is the oddest choice, especially since it was composed some time after Bello's "Jin" (the notes do not mention this).

Reading *Geol* is one of the most welcome and indeed timely. There is also one glaring omission. If Chaucer, Goldsmith, Tennyson, Longfellow and Matthew Arnold had been allowed only one poem each (Browning has three) there would have been room for *Venus and Adonis* or *The Rape of Lucrece*.

"God Bless the Gideons". Ogden Nash's crumbly savage attack on twentieth century popular literature, prompts the thought that a copy of "I Wouldn't Have Missed It" in every hotel bedroom might reach a lot of people who wouldn't look at a Gideons Bible. The Gideons



'Calm Sea', by Arnold Böcklin

Thus only in a dream we are at one. Extraordinary! Clough's night-muse brilliantly sums the light and dark of mid-Victorian doubt. I dreamt a dream; till morning light, A bell rang in my head all night, Tinkling and tinkling first, and then Tolling; and tinkling; tolling again. So brisk and gay, and then so slow! O joy, and terror! mirth and woe! Ting, ting, there is no God; ting, ting - There is no God; dong, dong!

A C Benson, who never dreamt out of character or out of class, provides this gem: Lunching with King and Queen (George V and Mary) I gave imitations of the Royal Family which were well received. The King's eyes were bloodshot, voice very loud. I walked with him, along a street. "There's the police station! Ha, ha! We all know what that means. . . I am told that I have a remarkable facial resemblance to the late Dr. Pugh!" A footman arrives. "I regret to hear that your Majesty that Her Majesty is waiting in the carriage." K to footman. "I prefer to walk!" To me - that's the way to treat women! - pause - "You are a bachelor, Benson?" "Yes, sir." "Remain one, Ha, ha!" "You are a writer, Benson?" "Yes, sir."

"These remarks of mine would make good copy!" This all written down on waking. We read how Blake's original method of printing poems and pictures came to him in a dream. So too did the ring structure of *Benvenuto Cellini* reveal itself to the German chemist Kekulé. Sir Thomas Browne comments on a curious matter of rights: "Dionysus was absurdly tyrannical to kill a man for dreaming that he had killed him."

Lamla was ridiculously unjust to sue a young man for a reward, who had confessed that pleasure from her in a dream, which she had denied under his evasive senses. . . Still, the point remains open to debate.

Interpretation (which has ruined many a good dream-narrative in our time) is also not the business of this book, though it does include, perhaps whimsically, a number of dream-episodes from Artemidorus (c.150 AD) and Astruc (c.1650). Sample: "To wear a purple robe is a dream threatens a long disease. Better than now is 'To see a colt running denotes something mysterious'." Freud's novelty, you could say, was to invent time, and dig his sibylline statements from the dreamer's past. No, best to read the volume as an imaginative experience, looking some of the pleasures of poetry, fiction, and human portraiture. Unwise dreamers may also cheer themselves by the following homely advice. "My conclusion," Clough states, "that obscure messages by means of dreams are utterly inconsistent with the dignity of the gods." Two thousand years later (1973) one Sarah Ferguson observes: "I dislike the cult of dreams. . . Nor do I like hearing psychological discussions between those who do not really know what they are talking about. There is something soft and weak about such people."

And finally, Carlyle. "Dream! My dreams are always disagreeable - some confusions, some my clothes and the like, nothing beautiful. . . I am a worse man in my dreams than when awake: I am cowardly, I am dream of being tried for a crime." And then he splendidly adds: "I long ago came to the conclusion that my dreams are of no importance to me whatever."

In November Extemporary visits the Stait Theatre, Oundle, (8-9), and Walton Comprehensive School, Peterborough, (10-12). Cecilia Macfarlane can be contacted at the company's office, 01-240 2430.

Other RSC
The Royal Shakespeare Company are following up the success of last year's youth festival with a similar event which will be at the Old Swan until the end of next week. David Rudkin's new play *Space Invaders*, workshops for young playwrights, talks, practical work on the stage of the Royal Shakespeare Theatre given by Echo.

Further information from Nicola Russell, Stratford 296655.

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Yon, Shelley and Keats
And other elics
They missed the patter of little feet,
For he who sits and listens to patter,
Will never accomplish more than . . .

There is only one way to achieve happiness in this terrestrial ball,
And that is to have a clear conscience, or, at least, at all.

Ho is not only fondly funny; he's beautiful, well read, and rhymes "I feel that I have built myself a monument of bricks and mortar and 'Cole Porter'". Towards the end of the book there is a wholly serious poem about being in hospital called "Notes for the Chart in 1984".

The eerie imposters are all gone, all gone but one - Dodger Thomas.

I know he is lurking somewhere in a shadow, Dodger Thomas.

I've never met him, but old friends have told me his habit:

He enters without knocking.

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The room's the limit

Extemporary Dance Theatre. Theatre Royal, Bury St Edmunds.
Cecilia Macfarlane. All Saints Middle School, Sudbury.

Wherever Extemporary Dance Theatre goes, Cecilia Macfarlane, the company's teacher in education, will be nearby, taking workshops in schools and running short courses for teachers (of all disciplines, not only drama and physical education). While her work is related to the philosophy and repertoire of the company, and "aims to make the show that bit easier to understand", the workshops function perfectly well as one-offs.

At Sudbury she started by loosening up the bodies of her mixed group of 9 to 10-year-olds, inviting them to devise their own exercises. Gradually the movement became more inventive and wider - "the only limit is the room"; the children began to use each other for balance; everyday activities, at first precisely mimed, grew into surreal extravaganzas - actions simplified and exaggerated into art.

Using some of the music and choreographic ideas from one of the Extemporary's pieces - on this occasion, *Spiked Sonata* - exploring their newly acquired physical vocabulary and injecting their own ideas, the children were soon able to devise and perform short dances for each other. The shirley cocktail-party setting provoked much primping from the girls and boozing (often to oblivion) from the boys. *Spiked Sonata* itself - as if from the inside - would complement and complete the experience.

Extemporary brought a wide range of chamber pieces to the Theatre Royal, including the severely beautiful *ma pas de deux*, 1 2 X U, Fergus Egan's joyous and wicked *Dark is the Night* - *Gold was the Ground*, a pleasingly formal and succinct history of blues-jazz from Blind Willie Johnson to Laurie Anderson, from economic depression to mo-generation angst.

Jill Burrows

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ARTS



G G Klueter: Photomontage postcard 1928

Moscow in Piccadilly

Art of The Avant-Garde in Russia. Selections from the George Costakis Collection. The Royal Academy until November 13.

In 1947 when George Costakis began unearthing Russian avant-garde art, it was suppressed in the Soviet Union and largely forgotten in the West. By the time he left Moscow in 1977, bringing with him hundreds of works created between 1910 and 1930, research had proliferated, several important exhibitions had taken place and our appreciation of this amazing period had greatly increased. For most people, Camilla Gray's 1962 book had provided the initial revelation. Today, we have monographs in English on Lisitzky, Rodchenko, Malevich and Tatlin.

All these better known artists are represented in this exhibition but it is the quantity and quality of pieces by less familiar ones that makes it so important. The women alone are impressive. During the First World War, Olga Rozanova had achieved with her purity that would characterize many of Matissso's much later papier-coups and by 1917 had anticipated by 30 years (and without any of his pretentiousness), Barnett Newman's use of the vibrating, vertical band of colour.

Michael Clarke

Cambridge drama
Cambridge Theatre Company have arranged an educational programme of talks, weekend workshops and schools playdays to complement their autumn tour of Orton's *What Butcher Sow*, and David Pownall's new dramatization of *Pride and Prejudice*. A pre-performance talk by John Lehr (Orton's biographer), can be heard at Cambridge Arts Theatre on October 25 and a special weekend course on Orton will be held at Burwell House Adult Education Centre, Cambridge, from October 21-23.

After the show discussions on *Pride and Prejudice* follow performances at Marwick Arts Centre on November 3.

and at Cambridge Arts Theatre on November 17, while whole-day sessions designed for senior students studying Jane Austen, and including "scenes in action" workshops, take place at Cambridge Arts Theatre on November 16 and the Theatre Royal Bath on November 30.

A special weekend seminar at Cambridge on "The Novel as Play", featuring David Edgar, Fay Weldon, Mike Alfreds and David Pownall, will take place on November 12-13.

For further details of these and related events, contact CTC's Education Liaison Officer on 0223 357134.

Ann Fitzgerald

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Paranoia

A Passion in Six Days.
Crucible Theatre, Sheffield. Until October 29.

Paranoia is a word Harry Galkroger, MP, has only recently learnt. His own becomes apparent when he rails at a fringe meeting of the Militant Tendency, telling them they have "a chance in hell, and being mocked in turn for his tales about his working-class origins. "Forgive them their ill-usions", chants the chorus, commenting on the conference as a whole, for Howard Barker's new play is set in Brighton and is a satire on the Labour Party.

Galkroger is in fact the chief protagonist, an old-style Labourite who looks back nostalgically to the Wilson era - "It was paradise and we never knew it". "It was lies, rot, rot, his landlady, and Galkroger agrees, finding nothing wrong with that. Everyone is open to dialectical correction in this play, whether from their wives, Militant Tendency or the incorrigible political commentator, Sir Roger Claxton. The action is minimal. Galkroger catches camp while swimming in the sea. His life is saved by Ollint (Kinnock) who, Oukroger decides, must also become the saviour of the Labour Party. His speech is intended to nudge Galkroger into history, but in the event Galkroger is prevented from making it by a stray dog. Nevertheless, as Galkroger predicts, he is to rise as Raymond

Frances Spalding

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Both shows include: Comedy, Drama, Music and Mime! COSTS: (Notes: new revised costs, lower than before) Within the GLC Area - £3.50 per show (includes the school visit and follow up work pack).

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A case for heroic surgery?

Brian Morton on G F Newman's view of the health service

The Nation's Health. By G F Newman and Les Blair. Thames Television/Euston Films. Channel 4, Thursdays through October, 9.30pm. Follow the Nation's Health. Introduced by Joan Shepton. Channel 4, succeeding Fridays at 10.30pm. **The Nation's Health.** By G F Newman. Granada £8.95. 0 246 11412 6. £1.95.

The real danger of myths is not that they may crumble and plunge us into some unwelcome or uncomfortable "reality" but that they will merely turn into their own opposite: negative myths, inversions which are no less simplistic or partial.

Medicine, long linked to magic, inspires particularly potent fantasies. Mills & Boon present the profession in a wholly idealized way: icy but passionate, detached but caring, endlessly competent and endlessly attractive. Television is (outwardly, at least) a tougher medium; fictional medicine on television - *Emergency Ward 10*, *Angels*, *Heise Cuts*, *M.A.S.H.*, *Dr Kildare*, *Dr Finlay's Casebook*, *Trapper John*, *St Elsewhere* - looks for the frailties and personal dramas behind the image; television goes for either humour or sentiment and thus usually appears far more deeply compromised, leaving the image intact.

Gordon Newman regards an intact image as fair game. He has already made an impressive career out of debunking first one, then another, stereotype. *Law and Order* used cliché techniques, sustained situations and characterizations to present a "realistic" picture of Britain's police as corrupt, unfeeling bullies. In *The A*

serial set in an imaginary teaching hospital, Newman's *The Nation's Health* is a more subtle and sophisticated work. *Dr Kildare* and *Finlay* have transformed grotesque into the Mr Hyde consultants of modern detectivebook surgery.

Five-on-the-wall series like *Police and Your Life* in *Their Hands* are only occasionally, more usually, they presented little more than the awful, deadening ordinariness of any job. By choosing fiction and by dramatizing Dr Jessie Marvell's route through surgery, GP, gynaecology, geriatrics and psychiatry, Newman has been able to weight his evidence.

In a very real sense, *The Nation's Health* has collided with its own publicity and with C4's own follow-up forum, screened the night after each play. Even those, uninterested or too cynical to watch, will have heard what it's about: "seeing is believing".

"Seeing is believing" is the usual cliché of shock horror. The NHS is laid bare and condemned. Let me miss the point, each play is introduced by an epigraph: that psychiatric hospital "don't cure the sick but defend a society based on privilege and justice"; that health "should be judged by the quality of life, rather than its quantity"; "The medical establishment prefers treatment to prevention"; "Objectivity and humanity cannot



Centre, Dr David Passmore (James Griffiths) talks to cancer patient, Ray Taylor (Teny Calvin), watched by Dr Jessie Marvell (Vivienne Ritchie)

coexist more than a little". These sound too persuasive to yield up their ambiguity straight away.

Even allowing for some dramatic compression of events, the series is a display of the kind of "reality" that is displayed back to front: the wrong end of the telescope. A cardiac pacemaker is traded off against a convenient parking space; a ward is closed and sold off as a bullet-proof luxury wing to the Arabs. Doctors and consultants are seen as corrupt, greedy, cynical, racist, sexist, senile, unfeeling, insensitive, often drunk, easily bribed, eager to raffle their skills, only concerned with paying patients or with cases that will make up interesting paper for the *BMJ*. Doctors' language is clichéd, euphemistic and patronizing: "that's the ticket", "there's a good chap", "right as rain", patients are "popped" into surgery to be "fixed up", "put right"; the removal of half Ray Taylor's cancerous face is "heroic" (more acceptable than "radical") surgery, a "commando procedure"; the womb is "that little box down there" that a menopausal woman won't be using any more.

In medicine, as in politics, ethics and accountability have become a clichéd area of concern; a family, a new cancer treatment; a Medical Ethics Committee discusses the disfigurement of a patient; a similar committee is circumvented to allow an American researcher to experiment with implanted HeLa cancer cells, using others

ly patients without families.

More worrying than these fictional details - some of them undoubtedly based on fact - is Newman's attack on mainstream medicine and its practitioners and his implied support for "alternative" therapies. Vivienne Griffiths, who plays Dr Jessie Marvell, is a point in a point) is unsatisfactory as the vehicle for Newman's critique and for the supposed alternatives. The "little lady" is chosen by the hospital hierarchy for her looks and qualifications - apparently in that order - but becomes known and unpopular for her anti-establishment views and techniques. These, though, are so mildly expressed as barely to seem critical at all. Jessie drifts in and out of the series, quizzical and detached, casting long, searching looks, an infuriating half-smile on her face, amused and superior. She is made to appear barely competent, the which must represent a serious dilution of the film's aims.

The Nation's Health fixes the odds against a medieval morality play but ducks the issues that really might help re-align the "objective" and the "humane". Ray Taylor consents to the radical surgery on his face; the psychological and social consequences of such an operation are pointed out to him, coolly and without undue emotion. In the event, Ray dies of a sudden cardiac arrest in the recovery room. The elderly Mrs Dewees is taken off radiotherapy and cytotoxic drugs at her own insistence and makes a dramatic recovery. There is no mention of her cancer but, untreated, her health is better. This equation of surgery with

misery and death, withdrawal of treatment with an improved "quality of life", is a dangerously naive one.

The logic of the instance suggests that all medical "treatment" should be stopped and replaced by "cure", still a poorly defined alternative; "prevention" for the time being, is a less realistic option, though ultimately the only acceptable one. Finally, both Newman's examples dodge the important questions: how would Ray Taylor have managed with half a face? could he have lived a "useful" life? a relative of his? What has been done to his self-image? to his relations with his wife, family and friends? To stop with the catastrophic and here unconvincing) deconstruction is to ignore, presumably deliberately, all the medical apparatus of reconstruction, skin and bone grafts, prosthetics, counselling and integration. Equally, how long did Mrs Dewees survive and how happily? Is any of it worth the enormous effort? The fado to credulity is simply sentimental and evasive. Nay-saying is easier to pull off than positive response; Newman trots out all the barely substituted objections but pointedly refuses to explore the alternatives beyond offering us lectures on them.

The NHS like the common law, the education acts, the civil airways charters, was geared, by definition, to large numbers. The small-is-beautiful philosophy of alternative medicine is a luxury, elitist option, which assumes that ordinary people are clever, self-reliant and wealthy enough to spend the time, money and physical and mental effort to cure themselves.

Is it honestly realistic to expect a consultant surgeon, who may see (on average) 20-30 patients in a working lifetime, to be able to treat them all as complex individuals with specific needs and problems? Equally, can a mortuary attendant earning a bread-line wage be expected to handle many hundreds of endovers and treat them all with the dignity and respect human beings require? Or at least do so without becoming depressed or mad?

There is a lot to be said for specialization, for reducing disease to a series of labelled symptoms. And there is something to be said for treating corpses as trash. When the spirit is gone, the human stuff is rubbish. We have become fixated on illness and if we have negative premises, we can only expect negative conclusions.

If the NHS is sick, that is largely because the nation's health is not what it might be. To blame it all on the doctors is absurd. Illness caused by treatment, so-called iatrogenic disease, is on the increase, but so is demand for treatment; the more we expect, the more we depend on specialists. As long as we identify medicine and magic, we will continue to be disappointed and horrified at the apparent callousness of doctors; they treat us as symptoms and case-histories because we present ourselves as such.

Alternative therapies do succeed and are not to be mocked; proportionately to the numbers involved, they enjoy a good success-rate. But they are not (yet) a viable foundation for a new, humane health service, flexible enough for 55 million individuals. Medicine, like almost everything else, has to depend on the most probable and most widely available solution, not the best.

Newman makes much of doctors' desire to retain power and not to relinquish areas of expertise: osteopathy, leucocytosis, leucocytes and any intruders into their highly profitable field. Self-interest does exist but it is also true that it is the medicine doctors who have to face and who break down.

Newman's heroine underestimates her case. She is querulous, unsympathetic (in the dramatic sense only) and detached. She lacks either the courage of her own "alternative" conviction or the aggressive competence of a mainstream antagonist. She is not a representative type, a detached observer; this is ironic given Newman's blurring of the medical profession's obsessive pigeon-holing and the fact that the last thing anyone wants in a hospital is a detached observer. Despite this, *The Nation's Health* makes good television. It does make a point, but not the point that the publicity and its author have suggested. The doctors come out surprisingly well; the least attractive and most callous character is a patient, not a doctor. It is the rest of us who are indicted.

Talk about the media

The Triangle, Birmingham's newest arts centre on the campus of Aston University, is to be the venue for a series of lunch-time talks on "Media Matters" this autumn, organized by Birmingham Film Workshop, a small independent company based at the Triangle.

The first five talks (to be held fortnightly from October 14), will be given by journalists whose approach to work in the media has already challenged old traditions and orthodoxies. Helen Baehr describes the approach of her Channel 4 documentary series, *Broadside* which is committed to using women at all levels of production, on and off screen, and on October 28 members of the programme's production staff will lead a discussion on Channel 4's *Edgewise Alternative*.

Aun FitzGerald

Next week

Video kids: a special series of articles on the social effects of the video revolution, including reports on new research, parliamentary initiatives for reform, market trends, and interviews with child addicts, parents and teachers

Discovering the Human Mind. By Stuart Sutherland. Longman £6.95 582 39221 7

Your Memory: A User's Guide. By Alan Baddeley. Penguin £4.95 14 02 24890

Experimental psychologists have seldom succeeded in explaining the mysteries of their trade to the outside world. Undaunted by the failure of others, Stuart Sutherland and Alan Baddeley, two of Britain's most distinguished academic psychologists, here try their hand. The scope of their books and the audience they are aimed at differ widely. *Discovering the Human Mind* is much the more general of the two; at least half the length of *Your Memory*, and with half its pages taken up by pictures, it is a rapid and somewhat superficial survey of the general field of psychology. But within its limits, Sutherland has managed to provide a quite remarkable amount of information, ranging from neuroanatomy and physiology, through perception, learning, memory, intelligence, and motivation, to psychotherapy, hypnosis and altered states of consciousness. Some of his readers may be surprised to find such a high proportion of a book about the mind devoted to discussions of nerve cells and neurotransmitters and to diagrams of parts of the brain, but it is a measure of Sutherland's skill that he can explain the relevance of such knowledge to psychology without encouraging others of his readers to fall into the opposite trap of supposing that an understanding of the brain will immediately tell us everything we could ever want to know about how we think, feel and react to the world about us.

The consensuous academic will not doubt complain that he has greatly overestimated the sense in which such complicated disorders as Parkinson's disease or schizophrenia are due to an imbalance in the neurotransmitter dopamine. But it is unrealistic to expect too much subtle qualification in a book of this nature.

My own complaint is rather that Sutherland provides too much superficial detail about too many topics without taking the time to explain what he is talking about. For example, a paragraph and a picture supposed to explain the nature of stereoscopic depth perception omit the crucial information necessary (at least for the 15-year-old schoolchild) to understand the phenomenon. A statement that long-term memories appear to take time to become established gives no hint why psychologists should have thought so, let alone the more interesting possibility that they might have been wrong. Relatively detailed accounts of psychotherapy, psychoanalysis and behaviour therapy make little attempt to discuss the contrasts between them, not even mentioning what is surely one of the most obvious and important points of difference, that abnormal behaviour is seen by some as mysterious, full of hidden purpose and significance, and by others as essentially fortuitous without deeper layers of meaning. The industrious reader will acquire a great deal of new information from reading this book, I doubt whether he will have grasped much in the way of principles on which to hang that information.

Lavish illustration, it seems, is an essential ingredient of a popular book. Some of the photographs and diagrams in Sutherland's book are genuinely useful, and not only those illustrating such unfamiliar objects as a synapse or the limbic system. Two photographs side by side, one of a grief-stricken family at a funeral, the other of hysterically excited fans at a pop concert, make the point, more clearly than any words could, that the physiological bases of many of the emotions we feel may be closely similar and that the distinctions we draw between them rest to a surprising extent on our interpretation of the situation in which we find ourselves. But many are simply misleading. The drawing of some cheerful looking dogs jumping across a fence in a tree-lined yard gives a grotesquely false impression of the brutality of experiments on so-called "learned helplessness"; an impression not corrected by a totally inaccurate account of the experiments provided in the caption.

Sutherland's book spends one out of every forty-two pages on chapters on the way in which we learn and remember.

The Making of Love. By Prudence Tunbridge. Corgi £8.95. Director of Training for some years past at the Institute of Psychosexual Medicine, Prudence Tunbridge gives a sensitive, jargon-free account of her work with people in sexual difficulties that would be invaluable to anyone doing counselling or similar work. She is a long way from the technological Masters and Johnson approach and describes her clients as real human beings, dogged by a variety of fears and resentments and traumas. Though she seems to have had a good measure of success, she makes no claim to have provided a magical solution for everyone who consulted her. Some improved personally but not sexually; others vice versa. She discusses abortion, fertility problems, contraception in the context of well chosen case-studies, such as a mild-mannered, "Enlightened" (sic) sympathetic, workaholic for the ordinary reader as well as the professional.

Rebecca Dinnage

Out of your mind

By N J Mackintosh

Alan Baddeley's 200 pages are devoted entirely to this topic. Although recognizably aimed at a popular market (witness the lavish illustrations), the audience is presumably the intelligent layman rather than the inquiring child. I suspect that psychology undergraduates will be among its most assiduous readers. But teachers, who are after all professionally concerned with the way we learn and remember, could find much to interest them. Experimental psychology, it is often said, is an artificial, laboratory-based science which perversely manages to tell one nothing about the real world. There are times when the reader of Baddeley's book may have his worst suspicions confirmed: there is not much of immediate appeal in his discussion of Ebbinghaus' research on the learning by rote of lists of "nonsense syllables" or of the influence of retroactive interference and proactive inhibition on forgetting. But Baddeley is the director of a research unit specialising in applied psychology and

has a good feel for the practical relevance of psychological research. One of the problems in applying principles derived from experimental analysis is that they are often found to be strictly limited, their operation being cancelled by that of another equally valid principle working to produce an opposite outcome. Thus there is ample evidence that, in the psychologist's jargon, spaced practice is often more efficient than massed; if you wish to learn some new information or a new skill, it will be better to practice a little at a time with intervals between practice sessions rather than to concentrate your efforts in one long session. But there is a limit to this, for it is also true that having recalled a newly learned bit of information on one occasion makes it easier to recall it again later. Thus the interval between successive practice sessions will not be so long that you forget all you have learned between each session. The ideal solution, then, taking advantage of both principles, is to start with

relatively short intervals, and to progress as rapidly as possible to more distributed practice as learning proceeds. Similarly, if you wish to apply a newly learned principle or rule to a different situation, it is better to have learned the principle in a variety of settings in the first place: narrow training does not necessarily generalize. But, working against this, it is harder to learn the rule in the first place if the training has been too varied. Psychology may well be an inexact science; it is certainly a complicated one. The phenomena it seeks in study and explain are subject to a bewildering variety of conflicting influences. It is a measure of the success of Baddeley's book that he gives one a feel for this, and of the progress that psychology has made that we can now recognize some of these conflicting influences and occasionally predict the circumstances under which now one and now the other will predominate.

My survey sample preferred the illustrations in Baddeley's book to those in Sutherland's; several of them form part of the experiments and observations that the reader is invited to try out for himself. Although he may occasionally stumble over the detail, the reader is made to think for himself and will end up with a good understanding of psychological research in learning and memory.

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Cautionary tale

Paul Caron

For better or worse

continued

where in Paper 1 (the lowest level). It is not only the objectives and associated questions which fail to reflect the aims, but also the syllabus. In spite of the fact that much of mathematics should be related to practical/realistic situations, the consortium found it necessary to include "applications" as one section out of twenty in its syllabus, as though it were a topic rather than an approach to teaching the subject. This results in the setting of questions out of context which test recall rather than application as in

7) The median of 3, 4, 7, 8, 3 is
A) 3 B) 4 C) 6 D) 7 E) 8

Also, note the distraction of the answers which are arranged in order so that a pupil with a somewhat hazy notion of a median is tempted to choose the middle one.

The syllabus alone tells one very little, but the examiners demonstrate their interpretation of it by the questions they set. In the case of NUMBERS we consider it a valuable and enjoyable experience for pupils to work with different classifications of numbers such as even, odd, triangle, square, prime, number chains as suggested by the syllabus. However, we would prefer to see examination questions which require recognition and use of number properties rather than those which are dependent on a pupil's ability to recall a definition as in

2) Which ONE of the following is PRIME?
A) 57 B) 61 C) 63 D) 65 E) 68

Also note that this is the second question of the first paper for the weakest candidates. The pupil who successfully recalls the definition may then be faced with a considerable number of calculations (no calculator allowed).

Although our comments have been confined to Paper 1 and level A (the lowest level) our reservations about this examination are felt throughout all of the papers. The whole idea of the examination is to test recall rather than application as in

which many have experienced during their mathematical education. This particularly applies to level A which is aimed at the average (Grade 4 CSE) pupil.

The most unpleasant feature of this document is the inexcusable move from the process/modelling end of the curriculum through to the tactical/algebraic end as one passes down through the hierarchy of aims, objectives, syllabus, examination questions. Is it deliberate policy or ineptitude which results in an examination paper which is the antithesis of the aims? Whichever it is, the resultant effect is all too predictable. The power to influence is a major factor in the hierarchy mentioned for it is the examination papers which influence the classroom practice most, followed by the syllabus, and then the aims, objectives, and the syllabus. As for the aims, if it is at all, they will raise a hollow laugh.

The consortium may claim that these papers are only specimen copies and that the actual examination will be better. We are deeply pessimistic about this as any significant improvement would depend on a radical shift in the curriculum. Furthermore, as teachers, we are powerless to influence the curriculum. We have been taken to our computers and have been asked to contribute to a new set of curriculum objectives. In the form of Mode 3 simulations there is now no guarantee that this document will continue. It would appear that this consortium of boards is certainly taking a lead, but in which direction?

Using the consortium that the requirements of the recommendations of the Cockcroft Committee or will it indeed be the recommendations of the Consortium of Schools? (HMSO 1979).

Mathematics counts. Reports of the Committee of Inquiry into the Teaching of Mathematics in Schools under the Chairmanship of Dr W H Cockcroft, HMSO 1982.

David Gmiterek and Sarah Straker are on the staff of the North Westminster Community School, London.

Can the micro play a part?

Anita Straker advises on computer software as a support for primary mathematics.

The Cockcroft Committee in their report "Mathematics Counts" recommended (not in this order) that mathematics teaching should be a balance between:

- Practical work;
- Exposition by the teacher;
- Practice by the children;
- Discussion between children, and teacher and children;
- Problem solving, including applications;
- Investigations.

The Committee said they had seen a great deal of exposition by the teacher and practice by the children, and a little practical work, but that instances of discussion, problem solving and investigations had been harder to find in the mathematics classroom. Later, and separately, the report recommended that teachers should provide many more opportunities for children to undertake mental mathematics.

Can the micro play a part in the development of primary mathematics along the lines put forward by Cockcroft? Practical work is generally thought of as using real materials and the environment, but if computer software can support teachers by providing complementary activities which are otherwise difficult to devise in the classroom using traditional resources then the answer must surely be an unreserved "yes".

Exposition Explanations by the teacher about how something is done, or why it is happening, are one part of mathematics teaching. Good exposition is not a monologue, but consists of a series of questions asked by the teacher and responded to by the children.

Since the computer is good at drawing and redrawing accurate diagrams and graphs, or at producing simple pictures and animating them, computer software can support this side of the teacher's role as a demonstrator, and, leaving the teacher to lead the children.

Children are arranged in groups, or as a pictograph which can be changed quickly into a bar graph. In TENS a random number of units are regrouped into tens and ones. DIFFER is a program which illustrates the three types of subtraction: taking away, comparison or difference, and complementary addition. AIRTEMP simulates a thermometer recording the air temperature throughout a 24-hour period, and at the same time draws the corresponding graph.

Practice There is already an over abundance of practice material in textbooks, on workbooks and on work-sheets. It is possible to justify micro time for even more of this type of activity?

Children practising tables with a program like TABCAR have been observed both to concentrate better and to respond with apparent enjoyment. There is no doubt too that it is our younger primary pupils who, with their shorter memories, benefit most from the immediacy of the feedback which can be given to them.

If straightforward drill and practice programs have to be used, then perhaps they should offer something not offered by the textbooks such as estimation of angles without bolting a protractor to measure them (ANGLES), stimulation of work with concrete materials to bridge the gap between practical work and written recording (ADDING). Some practice programs will also reward the teacher for the effort being made by the children (COUNT).

On the other hand, the computer undoubtedly has a valuable role in encouraging children to use mental skills where the procedure is an incidental part of a strategic game or puzzle. Programs like CONCEAL, GUSIN, TER, FLAGS or SUBGAME involve both strategy planning and the necessity to do simple arithmetic in one's head.

Discussion A wide variety of software can act as a stimulus to children to talk about mathematics. Some, like TOYSHOP, best played with several small teams. The necessary strategy has to be discussed. If we played 6, then you would be able to play 2, and then...



in a discussion with their teacher about a corporate solution to the problem of tracking down the hidden treasure on a two or three-dimensional grid.

Some software can be used by the teacher to help develop through informal talking children's understanding of important concepts. EUREKA helps with graph interpretation, JANE with the idea of a mathematical function, and SEEK encourages the use of precise mathematical description in sorting and classification.

Different programs, like HALVING, GLASS, BUILD or MALK, exploit the graphics capabilities of the micro, and can stimulate the use of language associated with shape, size, position, direction and movement.

Further possibilities are offered by the software that is designed to run like a film, without interruption by the teacher. In OOPS, for example, the computer will at random give the "wrong" answer to a displayed sum. The teacher can discuss with the children how often this might happen, which way the "wrong" answer is given, and how many "right" answers are made to make the sum "right", and an on.

Problem solving One of the reasons for teaching mathematics is to help children develop problem-solving skills. Some problems are in the form of mathematical puzzles (REVERSE, FARMER, FROGS, BUNGLAR, and WATCHPERSON). Primary children generally lack confidence in problem-solving situations but such programs can provide them with additional opportunities for developing their mathematical thinking. The role of the teacher in encouraging discussion about the possible forms of solution is an important one here.

Questions like "What would happen if we changed...?" or "How many different ways could we...?" or "Would it be possible to...?" all help to extend the children's thinking about a particular problem.

However, the biggest contribution the micro could make to the range of children's problem-solving skills may come from encouraging pupils to use the computer creatively by commanding it to carry out instructions. CRASH, for example, requires a series of logical moves to be defined in order to circumvent an obstacle course. LOGO is considerably more sophisticated, but can be used by children upwards to construct a variety of interesting geometric shapes.

For numerical problem solving simple programming by children in the language, BASIC is a possible choice. Primary school mathematics abounds with number situations which can be approached as a series of logical steps leading to a solution. Programs like FINDING, SOLVING, and PERCENTAGE are examples of this. They involve finding averages, calculating percentages, solving measurement problems connected with perimeter, area or volume.

It is well within the capacity of older junior children to find the dimensions of a rectangular box of fixed volume which has a minimum or to investigate what happens to the perimeter and area of a rectangle or circle if the dimensions are doubled or halved. This

also within their capacity to write their own programs to find sums, differences, products or quotients, to find factors, to generate the sequence of triangular numbers, to print all primes up to 1000 or beyond, or to solve all the number puzzles in "Limerick Number Puzzles".

In constructing such programs not only will the children be acquiring skills which could be useful later (some people argue that the algebra taught in secondary schools should be introduced through programming), but also they will gain more insight into the properties of the shapes and numbers with which they are dealing.

Applications Some programs require children to use mathematical skills to solve simple problems connected with everyday life. In SHOPPING, for example, the child must plan a shopping expedition, and collect the necessary purchases before the bus leaves.

Other programs can involve children in the application of their mathematical skills across the curriculum by simulating a more complex real life problem. The difficult arithmetic is done by the computer so that children can concentrate on the elements of choice and decision making. In LITTER the streets of a town have to be kept tidy. In CANDYLOSS a small sea-front business at Blackpool has to be run successfully. In MARY ROSE bearings must be taken, distances calculated, estimates made, in order that the treasure trove may be found.

In an alternative application children can use mathematical ideas and skills in unorthodox questions and seek relationships in a data collection. FACTFILE could be used by children to record information about, for example, different trees: measurements of the diameter and girth of the trunk, the height, spread, average leaf length, average leaf area, and so on, could all be entered. FACTFILE and PICFILE could then be used to encourage the children to ask questions, to analyse and interpret the data, and to stimulate further graphical or statistical work.

Investigations In some primary schools the teachers encourage the children, through investigatory work, to look for patterns, to conjecture, to test theories and draw generalized conclusions. It is not easy for primary teachers to find appropriate source material, but computer programs exist which enable the teacher and children together to undertake an investigation. Some like TILES, DIAGONAL or ERGO are fairly structured, but are nevertheless easy for inexperienced teachers to use. Some, like ASPIR or SNOOK, allow very free, open-ended investigation.

There would, therefore, already appear to be a range of computer material capable of helping primary teachers develop and maintain the balance suggested by the Cockcroft report in the children's mathematical work. Some of the software links directly to work that is already going on. The infants' teacher introducing the children to subtraction has at her disposal DIFFER and PARTIT to help her find what is happening. JANE and ASKASST encourage questioning and the use of language, SNAP and CHANGE, to provide re-inforcing activities through games. However, in the case of other programs, like the

investigations, the links with what is going on at the moment in the primary classroom may be somewhat less evident.

Perhaps all that is needed now is an adequate in-service training programme to give primary teachers opportunities to look at software and consider its possibilities, to help them develop criteria for judging the quality of the software, and to encourage them to have the confidence to use the best of it in school.

Anita Straker is at present seconded from her post as mathematics adviser for Wiltshire in order to lead the MEP Primary Project.

References Mathematics Counts (1982). Report of the Committee of Inquiry into the Teaching of Mathematics in Schools under the Chairmanship of Dr W H Cockcroft. HMSO.

Limerick Number Puzzles (1978). Gregory and Seymour. Creative Publications, Inc. Available from Targem, Stratham, Diss, Norfolk.

Software All the software referred to in this article is available for the BBC micro, although in some cases, there are in addition versions for the 800 or 4800 micros, or for the Spectrum. Programs are by various authors, and copyright is held by several different agencies. ASPIR, PIRATES, SNOOK, SUBGAME and TABCAR are part of a pack called Micros in the Mathematics Classroom, published by Longman, Burret Mill, Harlow, Essex.

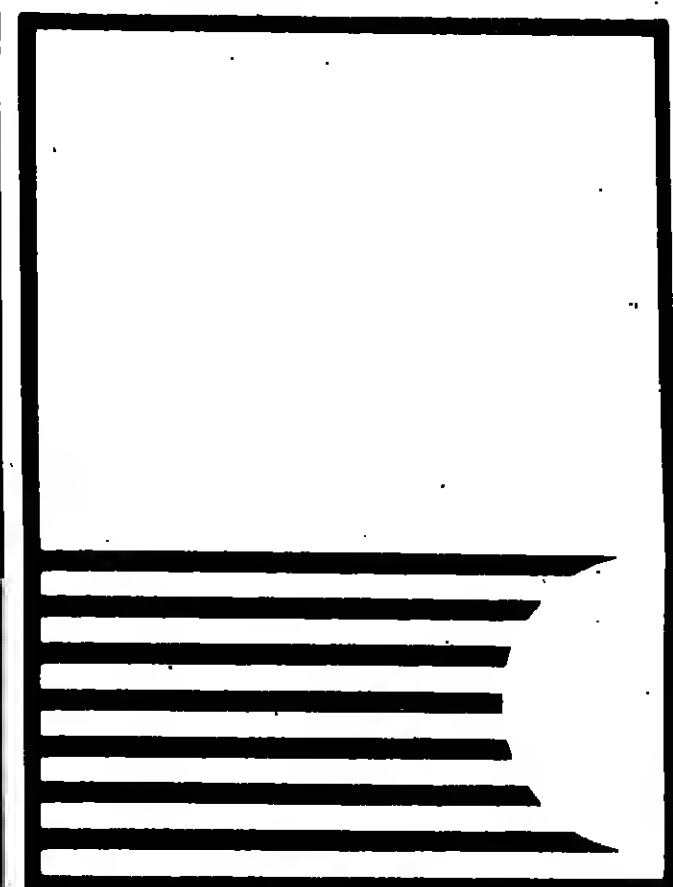
BUNGLAR, HARSET, AIRTEMP, COUNTERS, OOPS, JANE and SEEK are part of a five-module pack called Micros in the Primary Curriculum, being published by Longman. FACTFILE is a primary school database program, from Cambridge University Press. An extension, PICFILE, which allows graphs to be drawn, will be published later this year.

CRASH, SHOPPING, BUILD, EUREKA, ERGO, LITTER, FARMER and WATCHPERSON are part of the software packs in the MEP Micro-Primer series. Primary schools ordering a micro through the Department of Industry scheme will automatically receive copies. Additional copies can be obtained from Targem Ltd, 5 Granby Street, Loughborough, Leicestershire.

GLASS, ANGLES, ADDING, COUNT, MALK, REVERSE, TENS, DIFFER, PARTIT, SNAP, HALVING, TILES, DIAGONAL, and CHANGE can all be obtained for only the cost of the tape or disk from the MUSE Software Library. The MUSE Information Office is at Westhill College, Weoley Park Road, Selly Oak, Birmingham.

There are several versions of LOGO, a simple turtle-type graphics program. The BBC micro is sold by Computer Concepts, 16 Wayside, Chippinghams, Here. CANDYLOSS is supplied by LK Software, 55 Fitzroy Road, Bishopclee, Lanes. MARY ROSE and TREASURE ISLAND are published by Glyn, Prebend House, Parson's Foss, Aylesbury, Bucks, in Hampshire. The Council for Educational Technology hold the copyright of TOYSHOP, CONCEAL, GUSIN and TER, and FLAGS, on behalf of MEP. Collins will be publishing these at a later stage.

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EXTRA

Applied statistics: a new challenge

By Gordon Skipworth and Charles Plumpton

Judging by the number of candidates entering for the CSE, O, Alternative Ordinary and A level papers in statistics offered by the CSE and GCE examination boards, many schools run statistics courses for their pupils and the teaching of statistics is becoming more and more popular.

Despite syllabus changes which have been made during the past two decades, much of the material examined in statistics has remained unaltered and the style and demands of the papers have changed very little.

However, professional statisticians, particularly those in universities, have become increasingly critical of the style of question found in the traditional statistics examination. In effect, almost every question instructed the candidate to perform some calculation, give a numerical answer without qualification of the method or model used, and then proceed to the next question.

Professional statisticians often disagree on the models suggested by the examiner and universally emphasize the almost complete failure to require candidates to justify their calculation or interpret numerical results. Fundamentally, statistics is a very demanding subject and a successful solution of a real-life problem requires considerable experience and insight, perhaps even beyond that of examiners who have been trained as mathematicians but not as statisticians. Indeed, differences of opinion, concerning the correct solutions of GCE statistics questions, abound among the experts. They do, however, agree that changes in school-taught statistics are essential.

To meet these points, in June 1982, the University of London GCE board

introduced a new syllabus in Applied Statistics at Alternative Ordinary level and withdrew its traditional Alternative Ordinary statistics paper. This new syllabus is designed to assist a student in the understanding and interpretation of the statistical data encountered in contemporary society. Students who have followed an O level mathematics course, but not necessarily obtained a Grade C or above, should have sufficient background knowledge to follow the course. It is intended that the syllabus should be treated in such a way as to develop the capacity to assess numerical evidence by students studying subjects which may or may not include mathematics at A level.

The examination consists of one three-hour written paper containing one compulsory question, requiring comment on tabulated data, and seven other questions from which candidates are required to answer four. The syllabus covers much of the material examined hitherto elsewhere and is briefly summarized under the following headings.

Sampling and experimental design
Surveys, censuses, representative samples, sampling methods, role of "controls", comparability, elimination of bias and reduction of residual variation.

Presentation
Tabulation and pictorial representation, treated from the point of view of the purpose to be served by a given format.

Measures of Central Tendency and Dispersion

Measures to be treated from the point of view of summary statistics (mean and variance, for example) for particular purposes in the context of real data, where real purposes are

demonstrably served. The measures are to be discussed in relation to the shape of the frequency distribution. The idea of the normal distribution and use of tables as a graduation technique—95 per cent of distribution lies within ± 2 standard deviations. Information and Camperison.

Standard error of sample means, standard error of difference of two means, significance of differences which exceed two standard errors. Measures of association and relationship.

Regression lines and formulae, correlation, discussion of the connexion between statistical and causal independence and the coefficient r^2 as a measure of dependence. The importance of this new examination lies not only in its syllabus content but also in its demands on the candidate in relation to that content. No longer is the requirement simply that of performing calculations, underlining the answer and moving on to the next question. It is now essential to justify the calculations and attempt to interpret the results. The combination of calculation and meaningful interpretation is a requirement for the award of an O level Grade A, whereas the ability to calculate without justification and interpretation is unlikely to lead to anything higher than the award of an O level Grade C.

The first entry of candidates, in June 1982, responded well to the aims of the new syllabus. Of course the introduction of a new examination is an anxious time for both examiner and candidate alike, with both worrying about the other's expectations. Applied statistics was no exception. However, the overall performance of the first entry was encouraging and it is to be hoped that



Vital statistics?

the number of candidates entering for the examination will increase and that the syllabus will attract students whose main subject interest is not mathematics. With statistical methods now being used in a wide range of disciplines, the time is right for students studying A level geography, economics, biology, history, etc. to be exposed to these methods and this new examination might well be an instrument for measuring the success of such exposure.

Statistics in schools should be clearly designated as an experimental subject, with coursework as an important requirement. For over a decade the University of London GCE board's A level subject, pure mathematics with statistics, has emphasized the need for students to undertake projects in statistical work. Perhaps, in accordance with the report of the Cockcroft committee, this should apply to all statistics now being taught in schools.

Mr Skipworth is Chief Examiner for Alternative Ordinary level Applied Statistics and Dr Plumpton is Moderator for mathematics for the University of London GCE board, but any views expressed are their own.

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a course for the first three years in secondary school.

The authors are well aware of the extra difficulties in learning maths which can be caused by reading problems. So the language is simple and the text kept to a minimum. The presentation is clear and direct to avoid confusion.

MATHS WORKS A.B.C covers basic skills in the essential areas of numbers and arithmetic, mensuration, geometry, graphs and statistics as well as other topics such as Venn diagrams, probability and algebra. Topics are presented in short and easily assimilated sections. Skills are practised and revised throughout to give a thorough grounding in basic mathematics. Mathsworks 1 and 2 follow on from Mathsworks A.B.C to make a five year course.

There are Pupils' Books for each level as well as Teachers' Books and Worksheets which are the workbooks for the course.

Mathsworks Book A £1.95 Teachers' Workbook A 70p Teachers' Handbook A 80p
Mathsworks Book B £1.95 Teachers' Workbook B 70p Teachers' Handbook B 80p
Mathsworks Book C £1.95 Teachers' Workbook C 70p Teachers' Handbook C 80p

Special introductory pack containing one of each title: £10.00 only - saving £9.25

Write for full details, or for inspection copies of any of the titles, to the General Manager, Longman Group Ltd, Freeport, Bury Mill, Harlow, Essex, CM9 1BB (no postage stamp required)

Longman

Read all about it

There is no "best buy" among the professional periodicals. Francis Kellaway takes an objective look and finds they all have something useful to offer

This is an appropriate time of year to draw the attention of newly-hedged mathematics teachers to one form of support that may prove invaluable to them as their careers develop. Unhappily there are many who have seen years of service and who are apparently unaware of the information available to them in publications of the various professional associations.

Let us then take an objective look at the periodicals and other material issued from the Mathematical Association, the Association of Teachers of Mathematics, and the Institute of Mathematics and its Applications.

First, historically, there is the Mathematical Gazette. Founded in 1871, it publishes a number of periodicals and many reports. Members get most of these as part of the services provided by their subscription, and all are on general sale.

The Mathematical Gazette has an outstanding reputation, gained through the skills of a noteworthy series of editors and the quality of its contributors. Issued quarterly, it contains articles, notes and book reviews encompassing the whole range of mathematics teaching. It is true that for many decades the emphasis was on grammar school and early university work. Even so, successive editors have neglected other facets of teaching.

The original aims of the Gazette, when it was established in 1871, were to provide a vehicle of communication between members, especially where methods of teaching were concerned, and to disseminate news of discussions, meetings and reports of work in committees.

It moves on. Number 400 of the Gazette appeared in 1973. As the editor emphasized, there was then a very different educational and mathematical scene from that of 1871. Socialism was celebrated, in 1948, (Socialism was almost unrecognizable by a generation of teachers familiar with a pre-war world).

The number of young mathematicians at all levels was enormously greater, teachers' qualifications and quality

tively, were of a different order; the range of courses involving mathematics had expanded, and the content of those courses was in constant ferment. So the policy of the Gazette was to make the teacher's work more effective. However, there were many who, who believed, rightly or wrongly, that much of the content of the Gazette was of little relevance to their classes. The Mathematical Association, sensitive to this and aware that in the changing times teachers more than ever needed reinforcing resources, had inaugurated a second journal, *Mathematics in School*.

This, firmly classroom-based, is of direct appeal to teachers in primary and secondary schools. The bulk of its material is of explicit help to those dealing with children of average (or even less than average) mathematical ability. It recognizes that many teachers of the subject may not be specialists mathematicians; it accepts also that this is an age of the calculator and the computer.

The unhappy thing is that so many teachers who could benefit from a regular study of *Mathematics in School*, do not do so. Even worse, they do not subscribe either to the equally meritorious publications of the Association of Teachers of Mathematics, in particular the quarterly *Mathematics Teaching*.

The ATM was founded in 1952 by teachers who felt that new methods were called for if an essential reform of school mathematics teaching was to be achieved. The association "works for changes in mathematics education which will relate it more closely to the powers and needs of children, and to the nature of mathematics as it is understood at the present time."

These aims are reflected in *Mathematics Teaching*, and in a splendid range of ancillary matter. Dealing with activities, discussion topics, classroom techniques and the like in appropriate, purposeful fashion, they represent an excellent account of every teacher's armory. There is no pretence for those dealing with any ability or age-range.

Perhaps, number books, mental arithmetic, microcomputers, curriculum planning, paper-folding, and probability are a tiny sample of topics recently dealt with, always with practical classroom conditions in mind.

Real-life mathematics dominates further, relatively new, journal, the Institute of Mathematics and its Applications has, from its inception, issued series of journals which rapidly achieved an international reputation. Although some of these concentrated on papers of high academic content, the IMA Bulletin has from the start contained much of interest and value to the average teacher. Six issues a year build into a reference library of resources that should be in every school.

In 1982 IMA introduced a periodical to promote the study of applications in mathematics, especially as related to the modelling process. *Teaching Mathematics and its Applications* has, in its first few issues, considered, among much else, the monitoring of a car's petrol consumption, and the mathematics of rowing, voting systems, lampshade covers and cranes. As the author of the last-mentioned article says "mathematics is all around us; it is all a matter of seeing it."

The objectives of all the journals detailed include providing assistance to teachers that will help them, and their pupils, appreciate mathematics and its relevance. The Cockcroft report's recommendations (which are undoubtedly being greatly influenced by the views of the MA, ATM, and IMA) gain frequent reference in the articles. The recommendations would achieve a speedier and more effective implementation if every mathematics teacher regularly read at least one of the periodicals.

There is no "best buy" among them. Teachers have individual needs, but can be helped by material selected from the cornucopia available. Further information from the ATM, King's Chambers, Queen Street, Leamington, MA, 259, London Road, Leamington, and the IMA, Maitland House, West Nor Square, Southend-on-Sea.

WELL TESTED-RELIABLE-BLEND OF TRADITIONAL & MODERN

WIDE RANGING-WELL TESTED-RELIABLE-BLEND OF TRADITIONAL & MODERN

SMP aid selected for Design Centre

A simple learning aid devised to help children use and understand angles has been selected this year by the Design Council for their list of well-made British products and features in a special exhibition at the London and Glasgow Design Centres. The SMP Angle Measurer has been developed by the SMP as a result of concern from teachers about the difficulties many children have with the traditional 'half-moon' protractor. The device is one of several inexpensive learning aids developed to accompany SMP 11-16, but this one has a place in any maths classroom, whatever course is being followed, as well as in such subjects as science and geography where elementary angle measurement may be a problem.

The SMP Angle Measurer is available now and, like all the SMP 11-16 learning aids can be ordered through usual school book suppliers (in the event of difficulty contact Cambridge University Press). The ISBN is 0521 25435 3 and the price for a pack of 5 is £2.25 + VAT.

The other SMP 11-16 learning aids include stencils, packs of cards for mathematical games and a scale for measuring percentage pie charts directly, without use of degrees. Full details are given in the brochure *SMP 11-16: a practical guide for the mathematics department*. The exhibition 'New to the Design Centre' continues at the Glasgow Design Centre until 5 November.

Right: bearings provide just one example of elementary angle work where the SMP Angle Measurer's 360 degree construction is particularly helpful.

Below: these 'machine game' cards are linked to a booklet in the first year material. Playing the machine game is the starting point for some simple algebraic work but also provides plenty of practice in mental arithmetic.



Recently published

SMP 7-13: Revised edition of Unit 1

Revision of Unit 1 is now complete and the details of materials now available are given below.

Complete Revised Unit £70.00

25888 5

Consists of the existing Unit 1 together with revised cards and record sheets.

Revised Cards 25065 X £12.50

The complete set of 121 cards which have been revised.

Revised Teacher's Handbook 27744 2 £1.50

This takes into account the changes in the cards.

Revised Answer Book 27743 4 £1.75

Gives answers to the revised cards and the cards which have remained unchanged.

Revised Record Sheets 25870 7 £1.50

Assessment Tests Section 1 25098 1 £3.25

Assessment Tests Section 2 25099 X £3.25

Assessment Tests Section 3 25100 7 £3.25

These packs of Assessment Tests have been completely revised and expanded, and divided up according to the section of Unit 1 which they apply. The tests for each section are now four pages long, which is the original length and each pack contains 10 copies, ample provision for a class.

Record Sheets for Section 1 Assessment Tests 25098 7 £1.50

Record Sheets for Section 2 Assessment Tests 25099 5 £1.50

Record Sheets for Section 3 Assessment Tests 25100 3 £1.50

As a new service to teachers we are providing tear-off pads of Record Sheets for each Assessment Test.

Revision of the existing SMP books

New Book 5 is now published and completes the series of five shorter books which form a revision of the original SMP Books 3, 4 and 5. New Book 5 comes in a single volume, unlike New Book 3 and New Book 4 which each come in two parts. Through-out the revised series, the electronic calculator is used as the chief calculating aid and this has influenced both the content and the layout of the books. As with other books in the series, each chapter contains carefully graded exercises and there is regular revision material. The new books can be used to follow SMP Books 1 and 2, or other courses. The five books are designed for the SMP O-level course but, like their predecessors, they are suitable for pupils who are preparing for other GCE O-level examinations. The teacher's guide to New Book 3 (both parts) will very shortly be available.

New Book 5 27571 7 £3.95

Teacher's guide to New Book 3 27208 4 £5.50

Individualised Mathematics

The publication of *Further Algebra and Computation* and *Geometry 3: Three Dimensions* means that, except for two revision books, SMP's *Individualised Mathematics* is now complete. This series of books is based upon the content of SMP Books 1 to 5 and Books A to G, X, Y, Z and presents the material in programmed form on a topic-by-topic basis. This makes the course particularly useful for students working alone or catching up on work missed.

A full list of titles is available from: Cambridge University Press.

Further Algebra and Computation 27265 3 £2.95

Geometry 3: Three Dimensions 27118 5 £2.95

Railway gradients

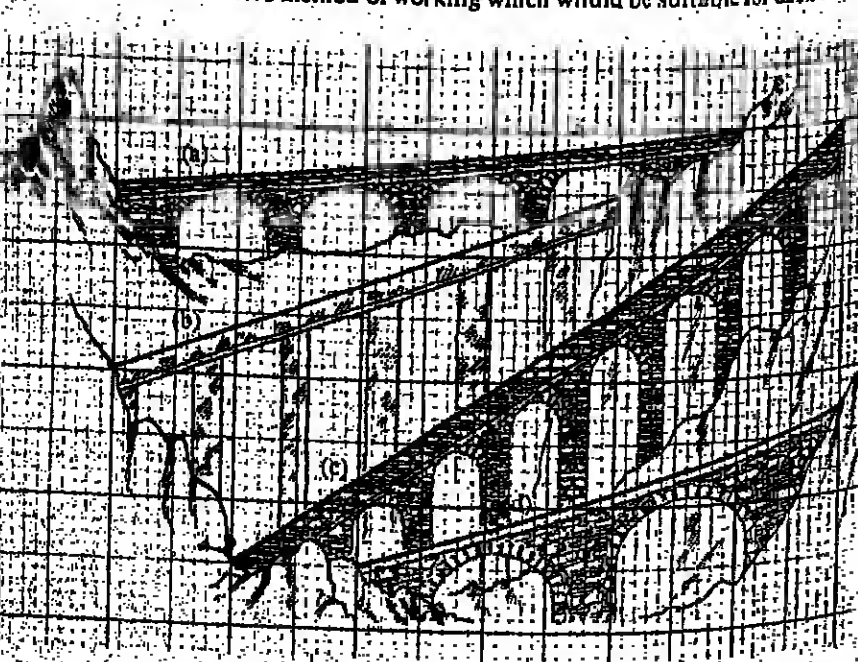
If the hill on a railway line is too steep, the engine's wheels will slip on the rails. The steepest gradient an ordinary engine can cope with is 0.09.

Mountain railways sometimes use the 'rack and pinion' system. A toothed wheel (the pinion) on the engine runs along a toothed rail (the rack). By this method the gradient can go up to 0.125. If there is only a single car, the gradient can be up to 0.5.

In a funicular railway, the car is fixed to a cable which pulls it up the hill. The steepest funicular railway has a gradient of 0.89. This information is summarised in the table below.

Method of working	Maximum gradient
Ordinary	0.09
Rack and pinion (train)	0.125
Rack and pinion (single car)	0.5
Funicular	0.89

B5: Find the gradient of each of these railways, to 2 decimal places. Write down a method of working which would be suitable for each one.



SMP 11-16 prices held

SMP 11-16 is no more expensive than other courses for pupils of this age, and provides much more material and greater flexibility.

And Cambridge University Press have taken two decisions which, compared with most other courses, now make SMP 11-16 an even bigger bargain. First, the prices of booklets in levels 1 and 2, which were published earlier this year, will be held at their 1983 levels throughout 1984. Secondly, the forthcoming level 3 booklets will be priced as for levels 1 and 2.

Individual needs

Since schools can order the separate components of the course in quantities which meet their individual needs it is difficult to give an overall figure for cost which could simply be applied to any school. But a comprehensive school following the guidelines for a 'basic provision' of the pupils' materials given in SMP 11-16: a practical guide for the mathematics department would spend, per child in the intake, about £1.80 on level 1, £2.80 on level 2 and £2.80 on level 3; these figures include booklets, answer books, review books and the learning aids devised as part of the course.

Below left: a page on gradients from one of the draft SMP 11-16 books designed for the top 25 to 30 per cent of the third year ability range.

Below: a page from a book in the draft Green series, for third year pupils.

SMP 11-16

Assessing pupils on the Green series

The last issue of SMP News described how, from the third year onwards, the draft version of SMP 11-16 splits into three parallel series of books, each catering for a different band of ability. The 'Green series' is designed for pupils who are not in the top 60 per cent of the ability range and, as such, are outside the official scope of public examinations at 16 plus. The content of the Green series corresponds closely to the Cockcroft 'foundation list'. Here, Spencer Instone and John Harses describe the scheme of assessment which has been set up for such pupils in the schools testing the draft version of the Green series, and the DES-commissioned study which will look closely at the working of the scheme.

In developing a system of assessment for pupils using the draft Green series we have aimed to produce something not only informative to teachers, parents and potential employers, but both informative and motivating to the pupils themselves. We wanted, too, an assessment which did not take place in one 'big bang' at the end of the fifth year but which would continue throughout years 4 and 5. The Oxford and Cambridge Schools Examination Board,

acting on behalf of the COSSEC (Cambridge, Oxford and Southern School Examinations Council) group of boards have agreed to certificate such a scheme. This means that pupils following the Green series will be able to gain qualifications which have the authority of an established examining body behind them. Pupils will be able to gain a certificate to be awarded at the end of their fifth year, but leading up to this there will also be the opportunity for them to have their mathematical achievement recorded at three stages at any time during their fourth and fifth years.

The materials we have provided in the Green series come in a variety of forms - books, booklets, games, puzzles and investigations on cards, as well as suggestions in the teacher's guide for further practical and mental work and discussion. This is because we think variety is essential to maintain interest. The assessment also comes in a variety of forms. This is partly to maintain interest, but also to reflect the very varied mathematical skills which we believe pupils need and which should therefore be tested in any assessment scheme.

We also believe it important that pupils should feel that the assessment is simply an extension of their everyday work. For that reason its format and the general atmosphere that surrounds it should not be too different from a normal lesson (if there is such a thing as a 'normal' lesson!). So, for example, assessment items can in general be repeated if a pupil wishes, and calculation for their not being allowed. We think it important that in the assessment pupils are showing what they do know, and not being shown up for what they do not know. Consequently a high percentage mark is expected for success to be recorded. The difficulty of the assessment is, we hope, pitched at a level which will allow pupils to gain these high percentages.

The scheme of assessment has five components.

- 1 A series of written tests called 'Recaps'. Each Recap will be based on about half a term's work as found in the fourth and fifth year course material, together with two extra Recaps which sample the third year material.
- 2 A series of mental tests. Each test will be given to a whole class and will contain questions based on the contents of one term's material, along with other simple mental mathematics questions.
- 3 A number of practical tests. The practical tests are designed to test whether a pupil can apply his or her mathematical skills in a very simple situation. Practical testing will take place from after Christmas in a pupil's fourth year.
- 4 A mathematics oral - a short interview towards the end of the fifth year, probably conducted by the pupil's own teacher.
- 5 We shall be providing a number of 'topic booklets' in the fourth and fifth years, which pupils may select according to their interests. The assessment certificate will contain a summary of those topic booklets which a pupil has successfully completed.

So far as it is possible, the assessment certificate will present the pupil's achievement in profile form. In particular the contents of the Recaps will be broken down into four separate areas of mathematics. Success by a pupil in each of these four areas will be recorded at three different stages, each assessment stage corresponding to a stage in the teaching material. These same stages will be used in recording the pupil's success on the mental tests.

As soon as a pupil has achieved success on (say) stage 1 of the four separate areas and

on stage 1 of the mental tests, a record of achievement at stage 1 may be awarded to him or her, thus providing an intermediate record and (we hope) motivator. The pupil's records of achievement will be incorporated in his or her final certificate.

One of three studies

The assessment of pupils using the SMP 11-16 Green series is the basis of one of three studies commissioned by the Department of Education and Science to look into the mathematics curriculum for low-attaining pupils, following recommendations of the Cockcroft report.

The studies are concerned with the development of a curriculum based on the 'foundation list' and with the feasibility of a system of graduated assessments in mathematics, and all three will run for three years from 1983-86. The other two studies are being undertaken by the West Sussex Institute of Higher Education, where a team will work with a group of schools examining teaching materials that are already available to see how they can be used in the ways recommended by Cockcroft, and by the National Foundation for Educational Research which is studying the feasibility of graduated testing, being its work on existing tests and the work of the Assessment of Performance Unit.

The study building on the SMP 11-16 Green series and its assessment has four phases: design and development of materials, represented by the Oxford and Cambridge Board. Hence the study's title: SSCC Graduated Assessment in Mathematics.

As explained above, the Oxford and Cambridge Board is providing certification for pupils following the draft version of the Green series. DES funds have enabled each of the other partners to appoint an extra member of staff to work on the SSCC study.

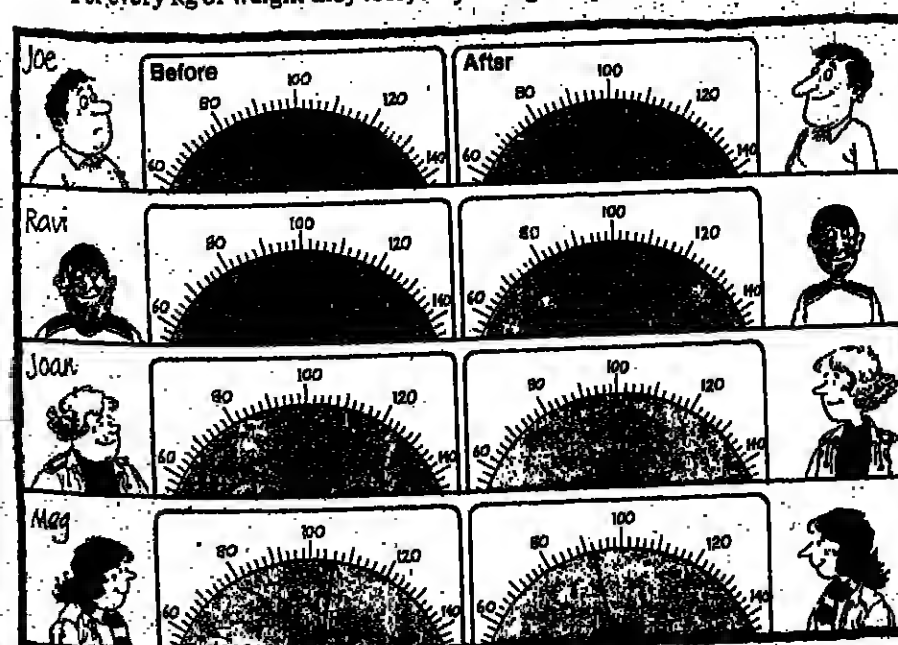
Sylvia Johnson has been appointed to the SMP and her task includes reviewing, developing and extending the range of assessment methods and items which may be used by schools following the Green series (she is also responsible for liaison with the other two commissioned studies). Suffolk County Council has appointed Robert McBride. He has two main tasks: on the one hand he will visit the Green series pilot schools, both in Suffolk and elsewhere to see the Green series in action, thus providing the teachers in these schools with more support and reporting back to the SMP 11-16 team on the success of the tests; in addition, he will maintain contact with a number of schools in Suffolk where the feasibility of using the Green series assessment, or rather developments of it, but not the teaching materials themselves, will be investigated. One aim of this part of the SSCC study is to try to ensure that the Green series approach to assessment is 'valid' - that is, it does test the underlying mathematical ideas of the curriculum; another is to investigate how schools can respond to a system of graduated assessment - how it affects the curriculum, both in content and in teaching methods.

Dr Margaret Brown at Chelsea College will be responsible for overall evaluation within the study. Gill Close has been appointed there to undertake this evaluation, considering both the schools which are, and those which are not using the teaching materials.

Further information about the SSCC study can be obtained from either of the Joint Directors: Peter Reynolds of Suffolk County Council and John Harses of the SMP.

D The sponsored slim

Joe, Ravi, Joan and Meg enter a sponsored slim. For every kg of weight they lose, they each get 20p.



D1 Copy and complete this table.

Name	Weight before	Weight after	Weight lost	Money raised
Joe	120 kg			
Ravi				
Joan				
Meg				

D2 (a) Who was lightest before the slim?
(b) Who was lightest after?
(c) Who was heaviest before the slim?
(d) Who was heaviest after?
(e) Who lost most weight?
(f) How much money did they raise altogether?

Examination news

O-level The two existing syllabuses, N and C, will be examined in June and November, 1984. For the June 1985 examination, and subsequently, only one SMP syllabus will be available. Schools have received a copy of this syllabus, which is presented in a syllabus-plus-notes format, together with specimen papers, from the Oxford and Cambridge Board. If you have not seen a copy and would like to, please write to the SMP office.

From summer 1984 onwards it is intended to give candidates more guidance on the degree of accuracy expected in answers. The following rubric will appear in all SMP O-level papers:

'In some questions the degree of accuracy required is stated. Where this is not done numerical answers should be given to an appropriate degree of accuracy. Numbers without units should be treated as exact. The answers have provided the four examples shown on the right for the guidance of schools.'

Additional Mathematics The new syllabus, and the new format for the papers, come into operation for the June 1984 examination. Copies of the syllabus are available from the SMP office.

A-level For the 1984* examination the syllabus will include a few additional topics so that the agreed 'inter-board core' is covered. Schools were sent details a year ago. A group of teachers has now proposed some further changes in the syllabus, reducing its size, and these are now being considered by the Secondary Examinations Council. If the changes are approved quickly they will operate from the 1985 examination, since they do not involve any extension of the 1984 content. Schools will receive details in the near future.

*We apologise for the fact that this data was incorrectly given as 1985 in the last SMP News.

The British team to the 24th International Mathematical Olympiad (IMO) held in Paris this year was the first from this country which was not entirely male! Alison McDonald was awarded one of the three second prizes won by the team, which also collected a third prize. Paul Baller won a special prize for an outstanding solution of one of the problems. Next year's IMO will probably be held in Czechoslovakia.

The National Mathematics Contest takes place on Tuesday, 28 February 1984. Many schools enter pupils for this competition which is suitable for able fifth and sixth form pupils. Full details of the competition and how to enter for it are available from The Mathematical Association, 269 London Road, Leicester LE2 3BE.

This national contest forms the first stage in the selection procedure for the IMO team.

A British team will take part in the International Physics Olympiad for the first time next summer when it will be Sweden's turn to host this annual contest for pre-university physics students. The questions set to the teams usually have a mathematical rather than a qualitative flavour and are designed to stretch the imagination by combining topics in an unusual way. But the mathematics required does not usually include integral calculus and 40 per cent of the marks (as well as 50 per cent of the 10-hour time allocation) are given for practical work.

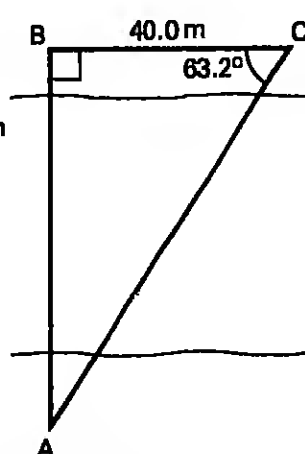
Selection of the British team is by means of a UK contest to be held on 9 March 1984 and consisting of written papers. Teachers of pupils who could tackle university entrance or difficult A-level physics questions should write for further details to Dr Cyril Isenbarg, Department of Physics, University of Kent, Canterbury.

Examples

1

Question

To find the distance between two points A and B on opposite sides of a river, a surveyor takes the measurements shown on the diagram. Calculate the distance AB to the nearest metre.



Solution

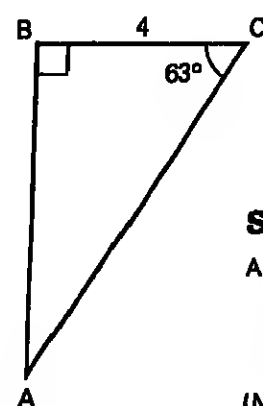
$$\begin{aligned} AB &= 40.0 \times \tan 63.2^\circ \\ &= 40.0 \times 1.98 \text{ (using tables)} \\ &= 79.2 \text{ m} \\ &\approx 79 \text{ m to nearest metre} \end{aligned}$$

(Note: either answer is acceptable if 'nearest metre' is not stated in the question.)

2

Question

Calculate AB.



Solution

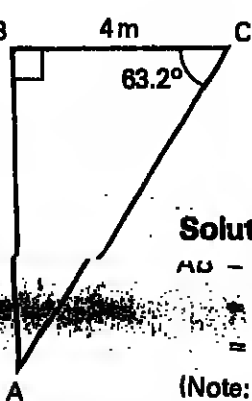
$$\begin{aligned} AB &= 4 \tan 63^\circ \\ &= 4 \times 1.96 \text{ (using tables)} \\ &= 7.84 \\ &\approx 7.8 \text{ (two s.f.)} \end{aligned} \quad \text{(Either is acceptable.)}$$

(Note: 4 treated as exact)

3 (using calculator)

Question

Calculate AB, correct to three significant figures.



Solution

$$\begin{aligned} AB &= 4 \tan 63.2^\circ \\ &= 7.9186541 \\ &\approx 7.92 \text{ m} \end{aligned}$$

(Note: the measurement of 4 m has been treated as exact since required accuracy has been stated.)

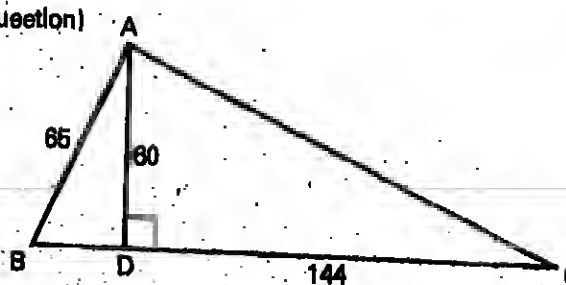
4

Question (part of a longer question)

Calculate exactly BD.

Solution

$$\begin{aligned} BD^2 &= AB^2 - AD^2 \\ &= 65^2 - 60^2 \\ &= 4225 - 3600 \\ &= 625 \\ BD &= 25 \end{aligned}$$



Publications in prospect

Pointers

A booklet for teachers of infants drawing attention to mathematical opportunities and classroom activities will be published early next year. Entitled *Pointers*, the booklet has been developed by a team of primary school teachers and edited by Pat Matthews; the text is fully illustrated, and links with Unit 1 of *SMP 7-13* are indicated.

Formulae and tables

In the day of the calculator it is no longer necessary to have available the extensive range of tables given in books of mathematical tables published for A-level use. A pocket booklet of mathematical formulae and statistical tables will be published next year providing A-level students with the necessary resources when a scientific calculator is in use. The booklet, which will also be of value to schools not using the SMP course, has been produced in collaboration with the Mathematics in Education and Industry (MEI) Project.

Investigations and stretchers

Developed to complement the first and second year work of *SMP 11-16*, *Investigations and stretchers* is a pack of material, which can be used with pupils of this age range, whether or not *SMP 11-16* has been adopted as the basis of the mathematics curriculum.

The pack comprises a teacher's handbook describing mathematical investigations suitable for use as whole-class activities in the first and second years and the 'stretchers', a collection of worksheets with problems for more able pupils. An aim of all the material in the pack is to encourage the pupil to think in an independent way, rather than select 'the right method' from a collection of standard methods already learnt. The stretchers are intended to be interpreted among other work over a period of time: hints and solutions are included in the teacher's handbook.

Investigations and stretchers will be published early next year.

In-Service Resource Kits

Two new titles have been added to the SMP's range of In-Service Resource Kits. This series of kits provides resource material for in-service training sessions such as might be organised for a school mathematics department by the head of department or by a local adviser for a more widely drawn group of mathematics teachers.

The kits vary in size and in style, but contain multiple copies of material on possible classroom approaches to mathematical topics (not solely 'SMP' topics or 'SMP' approaches), research results on children's learning difficulties, offprints from relevant recent articles in mathematics education journals and, in some cases, practical activities for the teachers themselves. Each kit contains enough material for several one-hour sessions and includes a teacher's section.

Total brought to seven

The new titles are *3-D geometry* and *Seeds*, and they bring the total number of kits available to seven. *3-D geometry* is intended to help teachers develop activities and resources for three-dimensional work in mathematics. The emphasis is on practical activities by the teachers as a basis for similar work in the classroom. The kit contains suitable materials including cubes, modelling clay, glue, etc., and is packed in a stout cardboard box.

Seeds is a different kind of kit, comprising 20 A5 cards raising topics for discussion. Each card presents a problem or a situation with a number of talking points on the reverse side. The cards are designed to stimulate lively discussion, but, as the title suggests, they provide the starting points for deeper investigation and for curriculum development. The accompanying teacher's notes include reduced size facsimiles of all the cards.

The following SMP In-Service Resource Kits are available from the SMP office. Please send an official school order, or a cheque payable to the School Mathematics Project with your order.

Fractions	£4.50 + £1.20 p.p.
Directed numbers	£5.00 + £1.20 p.p.
Calculators	£4.00 + £1.20 p.p.
On being euros (proof)	£5.00 + £1.20 p.p.
The mathematics department	£5.50 + £1.20 p.p.
3-D geometry	£6.50 + £1.50 p.p.
Seeds	£2.00 (including postage)

EXTRA

International anniversary

The ICMI is 75. Geoffrey Howson traces its past, present and future

What is the safe minimum of Euclidean geometry, the calculus and mechanics?

What position should the secondary schools take with respect to the nature of applications and the relations of applied to pure mathematics?

What should be the relative nature of the courses in the secondary schools for those who do not intend to proceed to the universities, and for those who do intend to do so?

These questions, to which mathematics educators still attempt to provide answers, were among those posed by the American educator, David Eugene Smith, when he spoke at the 1908 International Congress of Mathematicians held in Rome.

The early 1900s had seen many changes to mathematics teaching - in England, Euclid had been overthrown and replaced by Godfrey and Siddons,

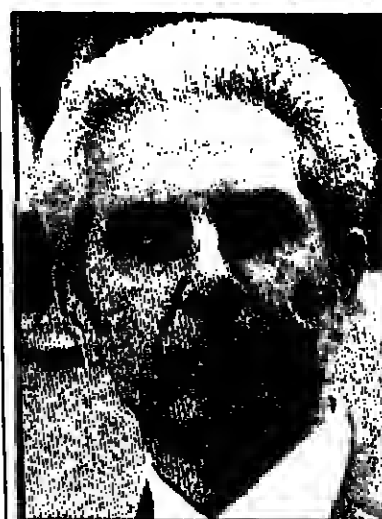
Hell and Stevens, and the like; calculus was becoming established in the sixth form; and, partly as a result of the efforts of John Perry, public schools such as Clifton and Winchester were establishing laboratories in which 'practical mathematics' (mainly mechanics) could be taught.

Not only was mathematics teaching changing, but so was the clientele - again England provides an example with the establishment of state secondary (grammar) schools following the Education Act, 1902. As in the 1960s, similar reforms and expansion were occurring in other developed countries. Moreover, as was to happen later, there were doubts about the gains and losses which could be recorded.

Why not then, argued Smith, establish a commission which would study and compare the changes that had

taken place in the various countries, and see what experiences could be shared. Smith's call was heeded and the ICM established a body - the Commission internationale de l'enseignement mathématique (or in its modern anglicized form, the International Commission on Mathematical Instruction, ICMI) under the presidency of the great German mathematician, Felix Klein.

The visitor to the Mathematical Association's library at the University of Leicester will be left in no doubt about the seriousness with which the ICMI approached its task, nor its diligence. Eighteen subcommittees prepared surveys, often in many volumes, of teaching practices in their countries and the result was outstanding both in terms of quantity and quality. Thus, for example, the French report ran to five volumes and that of



M. Jean-Pierre Kahane, currently President of ICMI

the US to 11. The British contributed only two volumes, but the first of these had more than 600 pages. Certainly, nothing on the same scale had been attempted before, or has been attempted since.

Unfortunately, the production of these reports coincided with the out-

break of the First World War. They remain as monuments of industry and as rich sources for the historian, but regrettably they were never analysed in depth nor significantly acted upon. The war effectively put a stop to the commission's work and to the series of symposia and investigations it had launched on topics as varied as 'The mathematical training of the physicist' and 'The teaching of calculus in secondary schools'.

Although the commission was revived in the inter-war years it never reached the same level of activity. Many of the 30-odd countries which had taken part before 1914 did so no longer, although there were some new countries, Czechoslovakia, Poland and Yugoslavia, to be welcomed into membership. The survey of the training of secondary school teachers and on contemporary trends in the teaching of mathematics - were carried out, but the commission's activities were a rather tired look.

In 1939 the commission lapsed into its second enforced coma, and it was not until 1952 that it resumed its activities as a sub-commission of the newly created International Mathematical Union.

Since then, educational systems throughout the world have expanded and mathematics education has been given even greater prominence. ICMI which now has 54 member countries drawn from every continent, still seeks through mutual cooperation to study and improve all aspects of mathematics education. It does this in a variety of ways: notably

- By holding four-yearly International congresses - that held in 1980 at Berkeley, U.S., was attended by some 2,000 members drawn from 100 different countries; the next will take place in Adelaide, Australia in August next year;
- By sponsoring regional meetings - for example, in Japan this month and in Thailand next May;
- By mounting symposia devoted to special topics - for example, a symposium on 'What should be the goals and content of general mathematics'.

● Through the work of affiliated groups - for example, the International Group for the Psychology of Mathematics Education holds annual meetings - the seventh was held in Israel in August;

● Through cooperation with other scientific unions - for example, the ICMI has recently cooperated with the Committee on the Teaching of Science of the International Council of Scientific Unions to produce a series of booklets intended to promote cooperation between science and mathematics teachers;

● Through the production of a six-monthly *Bulletin*;

● Through cooperation with UNESCO to provide volumes in the series *New Trends in Mathematics Teaching*.

In addition to these activities and in an attempt to consider problems more analytically and in greater depth, the ICMI is planning to embark on a series of 'studies'. The first of these, on 'Mathematics and computers and computation' is already under way - an international planning committee has been appointed, with members from France, Japan, the Netherlands, Britain, the US and the Soviet Union, a first 'discussion' document is planned for next spring and an international symposium in spring, 1985.

It is hoped to start work soon on three others: on current knowledge of cognition and of how teachers of mathematics might respond to this; on probable developments in education and the part within it that mathematics occupies which are likely to result from social and technological changes; and on mathematics as a service subject in higher education. The aim of such studies is not merely to give surveys of what is best in current practice or most up-to-date knowledge, but to provide frameworks within which national and regional discussion can take place.

We hope that local discussions and work will supply input for, and benefit from the output of, these studies. They will provide, therefore, opportunities both for participation and for the establishment of standards within a discipline which each year becomes more demanding and more important.

Dr Geoffrey Howson is director of the Centre for Mathematics Education at Southampton University, and secretary of the International Commission on Mathematical Instruction.

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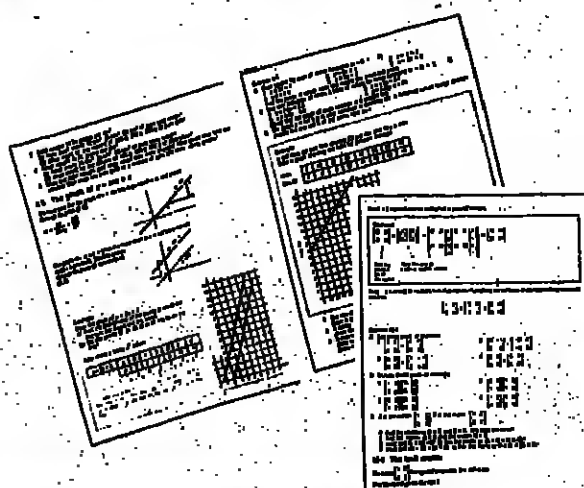
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What's the point in learning maths?

Asks Michael Wood

What is the point in learning maths these days? Can't computers and other electronic gadgets do the sort of routine operations which mathematics consists of so much more efficiently than human beings that it really is a waste of time teaching people to do mathematics?

I haven't often heard this argument in quite this form, which is odd because it seems to me to make a lot of sense. Cheap calculators can do long multiplications and long divisions, find square roots, and work out correlations and standard deviations. Microprocessors could easily solve most standard forms of equations, plot graphs and manipulate information in just about any way required. So why do we waste so much time throughout the education system teaching people to do badly what machines do so well, and making so many feel inadequate for being unable to do what they don't need to be able to do anyway?

The answer, I think, lies in a feeling that if they are going to use mathematical techniques, people must understand them, which means, so the argument goes, that a student - at any level - must be able to perform a mathematical technique before being allowed to use a machine instead.

This is a very strange argument, at first sight on a par with the idea of insisting that people should learn to run at 70 miles per hour before being allowed to travel on a train at this speed. But this perhaps is not quite a fair analogy because the economy of rail transport is not likely to have much difficulty appreciating what trains can be used for (although understanding how they work might be quite a different matter), whereas someone who has not met ideas like "division" or "correlation" before is not likely to have a clue what these concepts mean or what they can be used for. So isn't it

a good idea to teach people to use these concepts without electronic help so that they understand what they are all about?

My own view is that this line of reasoning has very serious flaws in it because it is based on an erroneous idea of exactly what it is necessary to understand. Suppose we are trying to teach someone about, for example, division - say one divided by 0.73. We could simply show them the standard paper and pencil method of doing the computation. In addition to this we might also explain, in mathematical terms, why this method works (or, on a more ambitious level, we might help them to an understanding of the mathematical structure of the situation and then invite them to work out their own method of doing the computation).

Some teachers of maths might say that a rote-learned method which the learner does not "understand" is sufficient, whereas others would say that, if the first step is to move the decimal point in each number two places to the right, the learner should understand the mathematical justification for this step. However, I would say that both sides have missed the most important issue.

In practice the only point in understanding and being able to "do" divi-

sion is to be able to use it in specific contexts. Suppose I take that one gallon of petrol will take me 73 per cent of the way to my destination and I want to know how many gallons I will need to get all the way there. The answer can be obtained by dividing one by 0.73, but many people (for example, I have difficulty seeing that this is the appropriate computation). They do not understand enough about the concept of division for it to be obvious that "1 ÷ 0.73" will tell them the number of gallons I need, even though they might be able to perform the division computation and even know why - in mathematical terms - the method works.

I can see no reason whatever why getting people to practise performing division operations should be any more help to them in understanding what division means and how it can be used than getting them to do lots of divisions on a calculator. What they do need to understand is how the mathematical concept relates to real life situations. (To return to the railway analogy, the ability to run at 70 miles per hour is most unlikely to be any help in planning a route from Penzance to Inverness by train.)

To sum up briefly: when people learn a mathematical technique there are three things they can try to under-

stand - how to do it, why the technique works in mathematical terms, and what the answer means and how to use the technique in various different contexts. Microtechnology is fast reaching the stage where there will be no point in being able to perform most of the standard techniques and so very little point in understanding why they work.

What will still be essential is understanding what the answers mean, and in most cases the traditional method of mathematics teaching of getting students to perform routine operations is likely to be very little help in achieving this end. A calculator which will work out correlations is no use if you don't know what correlations are, but experience in working out correlations with the standard algebraic formula is actually very unhelpful to anyone without considerable mathematical insight simply because the formula is too complex to make much sense of.

I think this means that what is taught in school mathematics should change radically - particularly at the secondary level. (At a very elementary level I don't think the argument has the same force. It is difficult to envisage a child understanding what addition means without some experience of doing addition in the sense of putting two sets of objects together and counting up the total.) The emphasis will be

firmly on what answers mean, on techniques can be used, and on solving problems by stringing a sequence of sub-routines (each of which can be performed by a microprocessor).

Pupils will no longer be called upon to do sums or to solve equations; instead their energies will be devoted to deciding which sums are appropriate to formulating equations, and to interpreting answers. These tasks are by no means trivial, as anyone who has had the task of teaching people how to formulate problems in mathematical terms, or how to interpret the meaning of a statistical significance test, will realize. In fact, these are probably the most difficult aspects of the process of mathematical reasoning: they are precisely those aspects which are difficult or impossible to translate into the form of routine algorithm which can be programmed into a computer.

Perhaps this is why these aspects tend to be given such a low priority by mathematicians: they only teach what is sufficiently routine to be programmed into a computer. This is so, mathematics teachers are dumbed to become redundant.

To be fair, I should perhaps point out that this article is based on a narrow view of mathematics. Some teachers undoubtedly do try to give their pupils the kind of flexible understanding of mathematical ideas which will not be rendered redundant by the computer revolution. On the other hand, the pressures of examination syllabuses, and the expectations of pupils, parents, employers, and society in general, mean that many students of mathematics concentrate on those aspects of mathematics which are not now of any real value.

Michael Wood is a lecturer in the Faculty of Education, Oxford Polytechnic.

Interface and integrate

Interface and integrate, by J. R. Irwin.

London, O. M. Stanley and H. M. Kenwood. Macmillan Education £1.95. 0 333 30779 8. Essential of Pure Mathematics. By J. R. Irwin. Edward Arnold £5.95. 0 7131 0551 8.

The first pair of books in a three-volume series bring together "all, or nearly all, the mainstream syllabuses of the various boards" for O level mathematics. Interface is one of those words from which there is no escape nowadays. It is, nevertheless, quite apt.

London, O. M. Stanley and H. M. Kenwood. Macmillan Education £1.95. 0 333 30779 8. Essential of Pure Mathematics. By J. R. Irwin. Edward Arnold £5.95. 0 7131 0551 8.

continuous scheme of work. The syllabus which was eventually worked out certainly did not please everybody; many topics cherished by 'modern' devotees did not appear, yet the traditionalists thought the syllabus too modern. However, in the end the compromise was a reasonable one.

There is a substantial common core. This core is the main constituent of books 1 and 2 of Mr Chapman's series. The third will, in the main, comprise topics required by some boards but not by others.

The critical words in the quotation above are "coherent and continuous" and they form the basis of the arrangement of the chapters in both books. There is a sturdy attempt to bridge the gap between academic classroom mathematical abstractions and the real life processes of the outside world. As one instance, metric units are generally employed, but a trivial exercise can evolve distances in miles and speeds in m.p.h.

The spirit of the books thus appears to be progressive rather than revolutionary. Future employers will doubtless over that school leavers talk glibly (though not necessarily with understanding) about sets or transformations but are incapable of adding or multiplying simple numbers or dealing with elementary monetary calculations. Both these have been the planks for years, and it is by no means clear in what way reorganized "mainstream" syllabuses will change matters.

The great thing is that new thinking has produced a set of textbooks that genuinely take a fresh approach to a difficult subject. The books are well written and produced, and carry abundant exercises. The teacher's books include answers to all the examples, and also advice on the way topics, especially the less familiar, may be introduced and presented.

Equally attractive is a collection of problems and worked examples from Macmillan Mathematics - an integrated approach, but may be used independently. Completely appropriate for its purpose, it has the additional merit of a remarkably low price.

A compact text for A level, covering the pure mathematics context of solving subject courses in mathematics or pure mathematics with statistics, is also praiseworthy. Mr Irwin's fluid text introduces new concepts most effectively; there are good illustrative examples, and graded exercises, and once again the quality of production is

There is a new approach in Basic Mathematical Tables (Bell & Hyman 90p) compiled by Peter Kenner. Easily read multiplication tables give the products of any pair of numbers between 1 and 100, and there are explanations of their extension to cover larger numbers of true-figure numbers. Function tables deal with logarithms, trigonometric ratios, square roots, and reciprocals in clear, simple, unnumbered fashion.

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Actual data

Where's the Maths in Print? £1.70. Maths About Town £1.75. By Bill Ridgway. Edward Arnold.

Each of these texts has been written as a pupil workbook containing 23 independent exercises based on given data. Each layout presents pupils with data on the left-hand page and related questions on the right-hand page. Each item of data is reproduced as an actual or feasible copy of newspaper cuttings, magazine articles, maps and price lists.

Where's the Maths in Print? introduces the maths of travel via British Rail distance charts and fares tables. Working out costs involves looking at menus, price lists, car sales advertisements, insuring home contents at local rates. Weight gets a mention and washing machine load weights; time via a television programme guide, timetables via a bus route; measurement via a map and a plan of a school. There is also some work based on a calendar, a newspaper article, hotel and "What's On" guide, health and hygiene and weather graphs.

Maths About Town introduces weight through a personal height chart, money through buying, planning, playing in the park, saving, flagging, lifting items, eating, travelling by train, measurement from a map and a plan; time at the swimming baths. There is also work based on newspaper items and a distance chart.

In both cases the introduction to the text is brief. The chapters are complete units which can be taken in any order. The layout and illustrations are actual data being presented to the pupil. I would like to recommend these books to all teachers of secondary pupils in their final years of schooling, but an unhelpful word of caution: the use of the word "Maths" in such titles is incorrect. Although words such as number, money, weight, length and time are contained within the accepted mathematics syllabus, there are no appearances in these texts of usually superficial incidental "Maths" in the main, pupils working through the texts will spend most of their time selecting the right numbers from the given data. The mathematics required of them once this has been done is extremely limited, very basic and rarely exceeds addition, "differences" and doubling or halving. I feel that a great opportunity of showing pupils how "mathematics" is used in print has been missed. Perhaps titles should be replaced with "Numbers".

As for the finished texts, it is a pity that insufficient care at the proof-reading stage has resulted in numerous errors. The language used could cause difficulties for pupils. A sentence of a readability test "seems to indicate that in each case the text presents passages with a higher than average vocabulary difficulty."

As pupil workbooks each text has a lot to be desired. Had the authors replaced the pupils' questions with suggestions as to what mathematics was contained in or needed to produce the given data together with how this could be developed then the texts would make superb teacher resources.

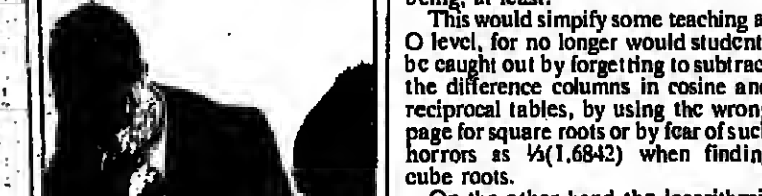
Peter Cunniff

Inevitable necessity?

Charles Plumpton on electronic calculators in GCE examinations

During the past decade, GCE mathematics examiners and moderators have experienced increasing difficulties in resolving the setting and marking problems associated with the rapid development and increasing availability of portable electronic calculators. These difficulties have fallen under two main headings.

First, examiners have had to ensure that candidates with electronic calculators do not have unfair advantages over those who must use mathematical tables or slide rules for numerical work. Second, it has become almost impossible to avoid setting questions in which all the work can be done on the calculator, so that an able candidate could merely write down the answer without showing any method or intermediate steps. In this case, in



Of course, some examinations already require calculators as an essential tool, but surely the time has arrived when this requirement should be a universal one. In fact, the University of London GCE board has already agreed that, for all maths papers designed for candidates in Britain, except multiple-choice papers, from June 1986, candidates will be expected to have an electronic calculator.

Such a decision will necessitate a number of important educational changes. Some of these will simplify mathematical teaching and education, but others may lead to difficulties. First, slide rules and mathematical tables, including logarithms (to base 10), antilogarithms, sine, cosine, tangent, reciprocals, square roots, etc., would no longer be needed, though would still be allowed for the time being, at least.

This would simplify some teaching at O level, for no longer would students be caught out by forgetting to subtract the difference columns in cosine and reciprocal tables, by using the wrong page for square roots or by fear of such horrors as $\frac{1}{\sqrt{1.6842}}$ when finding cube roots.

On the other hand the logarithmic function will first be met as the inverse of the exponential function (or vice-versa) at a later stage. This is probably an advantage but may not necessarily be so. Further, students will be unfamiliar with the use of tables and simple iteration; this may lead to difficulties later on if, for example,

Second, calculations can be performed with realistic numbers rather than those especially made up to cancel nicely as is the case with many examples set in theoretical mechanics, where, for example $g = 9.8 = 7^2 \times 0.2$ has been a boon to examiners.

On the other hand, by judicious approximation, and the use of simple multiplication (and division) tables, students must be able to assess the order of magnitude of the answer to a given problem. Also, the temptation to give answers as a decimal, or to round off figures when the data is correct to, at most, three significant figures must be avoided. Third, approximation methods, eg iterations, can be performed with speed and accuracy which are impossible with the use of tables alone. However, numerical integrations cannot be much improved in general, even if a programme for numerical integration is built into the calculator. Of course, much of the hard labour involved in determining statistical parameters can now be eliminated; the use of false means, etc, is hardly worth while, but the danger of misleading and unnecessary accuracy remains. Indeed it is increased.

The teaching time saved, when the use of calculators in classrooms and examinations becomes universal, can be spent on the topics recently introduced into the combined modern-traditional GCE syllabuses. In particular on more realistic problems and applications as advocated by the Cocksfoot report. Manipulative skills are still needed in this age of the electronic calculator, but much of the arduous, dull and uninspiring slog of numerical calculations can be eliminated now, and the students' time spent on more interesting ideas and problems. Nevertheless, the need for accuracy is still fundamental and, without it, such creators of wealth as engineers would be in great difficulties.

Finally, this article has been restricted to a consideration of electronic calculators and has not examined the implications of the computer which are not being installed in most schools and colleges. Soon, the electronic calculator itself may be as obsolete in our schools as are now the abacus and, happily, slide rules and mathematical tables.

Dr Plumpton is moderator in mathematics for the University of London GCE board, but any views expressed are his own.

"Please sir, why can't we do real sums?"

By Bill Ridgway

I well remember those interminable afternoons spent as a child in the neighbourhood primary school during which we seemed to do nothing but plough through a mass of long-winded mechanical sums. Tons, hundredweights and quarters, for the more adventurous, tons, hundredweights, quarters, stones, pounds and ounces. Then there was length: six miles three furlongs two chains five yards two feet eight inches multiplied by 54.

Perhaps my memory serves me false. Maybe it wasn't quite as bad as that. It certainly felt like it at the time, however. The fiery slogans contained in the 1944 Education Act may have permeated a school or two here and there, but from where I sat the embers of Victorian arithmetic still cast a rosy glow.

As a child of 10 or thereabouts, I never occurred to me to question what we were told to do. It may not have occurred to our teacher to question what he asked us to do, either. Sums were sums. Like the man who climbed mountains, you did them because they were there.

By the time I went to grammar school I had learnt the rote well enough. I knew my tables, and how many pence made the pound, I was not sure how the knowledge I had gained would benefit me either in out-of-school hours or in adulthood, apart from helping me not to get fished at the local chippi. I never asked. As it happened, table singing with Old Oily must have worked because I'd committed the lot to memory at an early age.

lack of confidence and neither, to be fair to them, had they.

It took me some time to realize the kids I was teaching actually enjoyed this maths-without-a-purpose. Especially the remedial classes. I'd go through the method of working on the blackboard until they were reasonably sure what to do, then throw the page at them with an instruction to bring out their books for marking after they'd done the first five. That way I picked up the stragglers and put them through the mill while the rest carried happily on.

I always tried to preface my teaching with a pertinent preamble on the applications of the sums they did. "You will find you need to be able to do sums like this when you leave," I told them. "For instance, if you were to order 368 eggs from the milkman and 23 were smashed you'd need to know how many eggs to pay for, wouldn't you, Jones?"

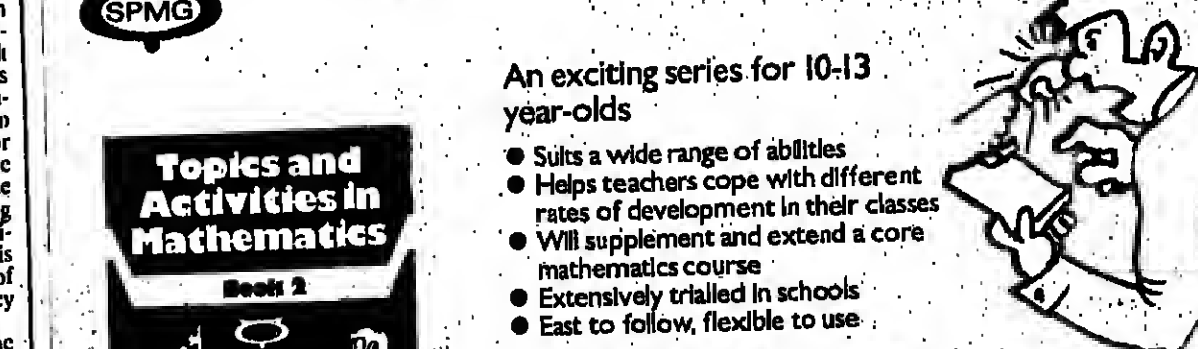
"Our milkman doesn't sell eggs, sir. He does yoghurt." Applications were only partly heeded. They seemed quite content to plough through the 50 or so sums without any reference from me to the role of Mathematics in the Great Scheme of Life.

Around the late 60s, early 70s, a new mood swept the secondary sector. Artificial subject boundaries were to be broken down. Girls were going to make fibre-glass canoes while the boys made lemon meringue. There was to be no more meaningless rote maths.

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Committee by letter,

giving full curriculum

vitae and the names and

addresses of two referees,

to the Education

Committee as soon as

possible. (153742)

WOLVERHAMPTON

BOROUGH COUNCIL

EDUCATION COMMITTEE

COFFICE HIGH SCHOOL

Required for January

1984, a committed and

enthusiastic teacher of

English, to teach in the

11-16 age range. The

post is full time and

involves teaching in the

school and in the

community. The salary

is £11,000 per annum.

DURHAM

COUNTY COUNCIL

EDUCATION COMMITTEE

COFFICE HIGH SCHOOL

Required for January

1984, a committed and

enthusiastic teacher of

English, to teach in the

11-16 age range. The

post is full time and

involves teaching in the

school and in the

community. The salary

is £11,000 per annum.

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COFFICE HIGH SCHOOL

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DURHAM

COUNTY COUNCIL

EDUCATION COMMITTEE

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enthusiastic teacher of

English, to teach in the

11-16 age range. The

post is full time and

involves teaching in the

school and in the

community. The salary

is £11,000 per annum.

REDBRIDGE

LONDON BOROUGH OF

EDUCATION

COMMITTEE

Required for January

1984, a committed and

enthusiastic teacher of

English, to teach in the

11-16 age range. The

post is full time and

involves teaching in the

school and in the

community. The salary

is £11,000 per annum.

Applications should be

sent to the Education

Committee by letter,

giving full curriculum

vitae and the names and

addresses of two referees,

to the Education

Committee as soon as

possible. (153742)

REDBRIDGE

LONDON BOROUGH OF

EDUCATION

COMMITTEE

Required for January

1984, a committed and

enthusiastic teacher of

English, to teach in the

Somerset County Council

SOMERSET COLLEGE OF ARTS AND TECHNOLOGY, TAUNTON
DEPARTMENT OF ART & DESIGN

1) LECTURER II - TEXTILE & SURFACE PATTERN DESIGN

Required from 1 January 1984, primarily to teach Textile and Surface Pattern Design on the DATEC Higher Diploma.
Applicants will be expected to have appropriate academic and/or professional qualifications with substantial experience in design practice and the ability to motivate students in this highly competitive area of study. Previous teaching experience is essential.
Closing date 28 October.

2) LECTURER II - HISTORY OF ART AND DESIGN
Required from 1 January 1984 or as soon as possible thereafter to teach on DATEC Diploma and Certificate and DATEC Higher Diploma courses (Graphic Design and Textile and Surface Pattern Design).
Applicants should hold a degree or equivalent demonstrating a good general knowledge of Art and Design History. Teaching experience is essential and applicants must have a genuine interest in developing areas of Art and Design History related to specialist courses.
Closing date 28 October.

3) PART-TIME LECTURER - HISTORY OF ART AND DESIGN
Required as soon as possible to teach 7 hours per week in a 16-hour situation on the General Diploma in Art and Design (DATEC). Salary grade Burnham Cat. IV.
Closing date for completed applications 28 October 1983.
Application forms and further particulars from the Chief Administrative Officer, Somerset College of Arts and Technology, Wellington Road, Taunton, Somerset TA1 5AX (SAE please).

SOMERSET COLLEGE OF AGRICULTURE & HORTICULTURE, CANNINGTON, BRIDGWATER TA5 2LS

WARDEN/LECTURER IA

Applications are invited for this post from persons with an interest in young people and with training and experience in agriculture or horticulture. Approximately 11 hours a week will be spent in teaching duties.
The salary is on Lecturer IA of the Burnham Scale of Salaries for Lecturers in Agricultural Colleges, at present £5,649-£9,735. Point of entry dependent on qualifications and experience.

Application forms and further details from the Clerk to the Governors (SAE 24 x 16 1/2 cm please) to whom the completed application should be returned by Friday 28th October. In an envelope marked

COLLEGES OF FURTHER EDUCATION

ISLE OF WIGHT

COUNTY COUNCIL
SCHOOL OF ARTS AND DESIGN
DEPARTMENT OF STUDIES
Required for January 1984 a Lecturer Grade I in Beauty, Hairdressing and Make-up. Ability to teach vocational and practical skills is essential. This is a new appointment due to the expansion of the school. Salary £5,649 p.a. plus pension. Further details and application forms available from the Principal, School of Arts and Design, PO Box 100, Newport, Isle of Wight, PO1 1ST. Closing date 28 October 1983.

KIRKLEES

METROPOLITAN COUNCIL
EDUCATION SERVICES
TECHNICAL AND ART
SCHOOL OF ART & DESIGN
Post of AD/2 in Photography. The post is available from 1 January 1984 or as soon as possible thereafter. The post holder will be responsible for the delivery of the course and for the supervision of the staff. The salary is £5,649 p.a. plus pension. Further details and application forms available from the Principal, School of Art & Design, PO Box 100, Dewsbury, Wetherby, West Yorkshire, WF13 2AS. Closing date 28 October 1983.

SOMERSET COLLEGE OF AGRICULTURE & HORTICULTURE, CANNINGTON, BRIDGWATER TA5 2LS

Applications are invited for this post from persons with an interest in young people and with training and experience in agriculture or horticulture. Approximately 11 hours a week will be spent in teaching duties.
The salary is on Lecturer IA of the Burnham Scale of Salaries for Lecturers in Agricultural Colleges, at present £5,649-£9,735. Point of entry dependent on qualifications and experience.

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LIVERPOOL

LECTURER GRADE I

COUNTY COUNCIL
TECHNICAL AND ART
SCHOOL OF ART & DESIGN
Post of AD/2 in Photography. The post is available from 1 January 1984 or as soon as possible thereafter. The post holder will be responsible for the delivery of the course and for the supervision of the staff. The salary is £5,649 p.a. plus pension. Further details and application forms available from the Principal, School of Art & Design, PO Box 100, Dewsbury, Wetherby, West Yorkshire, WF13 2AS. Closing date 28 October 1983.

Required for January 1984 a Lecturer Grade I in Beauty, Hairdressing and Make-up. Ability to teach vocational and practical skills is essential. This is a new appointment due to the expansion of the school. Salary £5,649 p.a. plus pension. Further details and application forms available from the Principal, School of Arts and Design, PO Box 100, Newport, Isle of Wight, PO1 1ST. Closing date 28 October 1983.

KIRKLEES

METROPOLITAN COUNCIL
EDUCATION SERVICES
TECHNICAL AND ART
SCHOOL OF ART & DESIGN
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SOMERSET COLLEGE OF AGRICULTURE & HORTICULTURE, CANNINGTON, BRIDGWATER TA5 2LS

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NORTH TYNSIDE

LECTURER GRADE I

COUNTY COUNCIL
TECHNICAL AND ART
SCHOOL OF ART & DESIGN
Post of AD/2 in Photography. The post is available from 1 January 1984 or as soon as possible thereafter. The post holder will be responsible for the delivery of the course and for the supervision of the staff. The salary is £5,649 p.a. plus pension. Further details and application forms available from the Principal, School of Art & Design, PO Box 100, Dewsbury, Wetherby, West Yorkshire, WF13 2AS. Closing date 28 October 1983.

Required for January 1984 a Lecturer Grade I in Beauty, Hairdressing and Make-up. Ability to teach vocational and practical skills is essential. This is a new appointment due to the expansion of the school. Salary £5,649 p.a. plus pension. Further details and application forms available from the Principal, School of Arts and Design, PO Box 100, Newport, Isle of Wight, PO1 1ST. Closing date 28 October 1983.

KIRKLEES

METROPOLITAN COUNCIL
EDUCATION SERVICES
TECHNICAL AND ART
SCHOOL OF ART & DESIGN
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SOMERSET COLLEGE OF AGRICULTURE & HORTICULTURE, CANNINGTON, BRIDGWATER TA5 2LS

Applications are invited for this post from persons with an interest in young people and with training and experience in agriculture or horticulture. Approximately 11 hours a week will be spent in teaching duties.
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NORTH YORKSHIRE

LECTURER GRADE I

COUNTY COUNCIL
TECHNICAL AND ART
SCHOOL OF ART & DESIGN
Post of AD/2 in Photography. The post is available from 1 January 1984 or as soon as possible thereafter. The post holder will be responsible for the delivery of the course and for the supervision of the staff. The salary is £5,649 p.a. plus pension. Further details and application forms available from the Principal, School of Art & Design, PO Box 100, Dewsbury, Wetherby, West Yorkshire, WF13 2AS. Closing date 28 October 1983.

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KIRKLEES

METROPOLITAN COUNCIL
EDUCATION SERVICES
TECHNICAL AND ART
SCHOOL OF ART & DESIGN
Post of AD/2 in Photography. The post is available from 1 January 1984 or as soon as possible thereafter. The post holder will be responsible for the delivery of the course and for the supervision of the staff. The salary is £5,649 p.a. plus pension. Further details and application forms available from the Principal, School of Art & Design, PO Box 100, Dewsbury, Wetherby, West Yorkshire, WF13 2AS. Closing date 28 October 1983.

SOMERSET COLLEGE OF AGRICULTURE & HORTICULTURE, CANNINGTON, BRIDGWATER TA5 2LS

Applications are invited for this post from persons with an interest in young people and with training and experience in agriculture or horticulture. Approximately 11 hours a week will be spent in teaching duties.
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COLLEGES OF FURTHER EDUCATION

OXFORDSHIRE

COUNTY COUNCIL
TECHNICAL AND ART
SCHOOL OF ART & DESIGN
Post of AD/2 in Photography. The post is available from 1 January 1984 or as soon as possible thereafter. The post holder will be responsible for the delivery of the course and for the supervision of the staff. The salary is £5,649 p.a. plus pension. Further details and application forms available from the Principal, School of Art & Design, PO Box 100, Dewsbury, Wetherby, West Yorkshire, WF13 2AS. Closing date 28 October 1983.

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KIRKLEES

METROPOLITAN COUNCIL
EDUCATION SERVICES
TECHNICAL AND ART
SCHOOL OF ART & DESIGN
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SOMERSET COLLEGE OF AGRICULTURE & HORTICULTURE, CANNINGTON, BRIDGWATER TA5 2LS

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Application forms and further details from the Clerk to the Governors (SAE 24 x 16 1/2 cm please) to whom the completed application should be returned by Friday 28th October. In an envelope marked

POWYS

COUNTY COUNCIL

EDUCATION DEPARTMENT
TECHNICAL AND ART
SCHOOL OF ART & DESIGN
Post of AD/2 in Photography. The post is available from 1 January 1984 or as soon as possible thereafter. The post holder will be responsible for the delivery of the course and for the supervision of the staff. The salary is £5,649 p.a. plus pension. Further details and application forms available from the Principal, School of Art & Design, PO Box 100, Dewsbury, Wetherby, West Yorkshire, WF13 2AS. Closing date 28 October 1983.

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KIRKLEES

METROPOLITAN COUNCIL
EDUCATION SERVICES
TECHNICAL AND ART
SCHOOL OF ART & DESIGN
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SUFFOLK

COUNTY COUNCIL

EDUCATION DEPARTMENT
TECHNICAL AND ART
SCHOOL OF ART & DESIGN
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KIRKLEES

METROPOLITAN COUNCIL
EDUCATION SERVICES
TECHNICAL AND ART
SCHOOL OF ART & DESIGN
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SOMERSET COLLEGE OF AGRICULTURE & HORTICULTURE, CANNINGTON, BRIDGWATER TA5 2LS

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Application forms and further details from the Clerk to the Governors (SAE 24 x 16 1/2 cm please) to whom the completed application should be returned by Friday 28th October. In an envelope marked

TRAFFORD

METROPOLITAN BOROUGH

EDUCATION DEPARTMENT
TECHNICAL AND ART
SCHOOL OF ART & DESIGN
Post of AD/2 in Photography. The post is available from 1 January 1984 or as soon as possible thereafter. The post holder will be responsible for the delivery of the course and for the supervision of the staff. The salary is £5,649 p.a. plus pension. Further details and application forms available from the Principal, School of Art & Design, PO Box 100, Dewsbury, Wetherby, West Yorkshire, WF13 2AS. Closing date 28 October 1983.

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KIRKLEES

METROPOLITAN COUNCIL
EDUCATION SERVICES
TECHNICAL AND ART
SCHOOL OF ART & DESIGN
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SOMERSET COLLEGE OF AGRICULTURE & HORTICULTURE, CANNINGTON, BRIDGWATER TA5 2LS

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WILTSHIRE

COLLEGES

SALISBURY COLLEGE OF
TECHNOLOGY
Post of AD/2 in Photography. The post is available from 1 January 1984 or as soon as possible thereafter. The post holder will be responsible for the delivery of the course and for the supervision of the staff. The salary is £5,649 p.a. plus pension. Further details and application forms available from the Principal, School of Art & Design, PO Box 100, Dewsbury, Wetherby, West Yorkshire, WF13 2AS. Closing date 28 October 1983.

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KIRKLEES

METROPOLITAN COUNCIL
EDUCATION SERVICES
TECHNICAL AND ART
SCHOOL OF ART & DESIGN
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SOMERSET COLLEGE OF AGRICULTURE & HORTICULTURE, CANNINGTON, BRIDGWATER TA5 2LS

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Application forms and further details from the Clerk to the Governors (SAE 24 x 16 1/2 cm please) to whom the completed application should be returned by Friday 28th October. In an envelope marked

COLCHESTER INSTITUTE,
Sheepen Road, Colchester, Essex CO3 3LL (Tel: 0206 570271, Ext. 95)

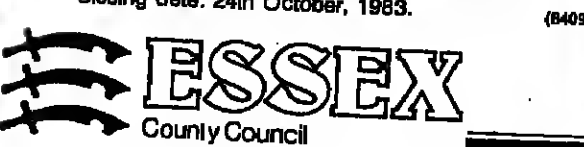
Required from January, 1984 or as soon as possible.

SENIOR LECTURER IN EDUCATION

To join the team teaching the Essex CNA Certificate in Education Course (based at Brentwood) and to work as a Teacher-Tutor at Colchester.
Candidates should have appropriate qualifications and good experience in Further Education.
Salary: Senior Lecturer £10,683-£13,443 per annum (placing on scale according to qualifications and experience).

LECTURER IN LANGUAGES

To teach French, German and/or Spanish to a variety of levels, including some higher level work with young adults.
Salary: Lecturer Grade I £5,649-£9,735 per annum (placing on scale according to qualifications and experience).
Further details and application forms for these two posts from the Director at above address.
Closing date: 24th October, 1983. (8405)



Further details and application forms for these two posts from the Director at above address.
Closing date: 24th October, 1983. (8405)

SURREY EDUCATION COMMITTEE

BROOKLANDS TECHNICAL COLLEGE

Heath Road, Weybridge, Surrey

DEPARTMENT OF ENGLISH AND COMMUNICATION STUDIES

Lecturer II

English and Communications

Graduate preferably with teacher training and substantial experience in GCE English and Communication Studies Department.

Lecturer I

Accommodation Services

To teach Hotel Catering and Institutional Operations on TEC Diploma and City & Guilds 715 General Certificate students. Experience in Reception, Control or Personnel Departments within the industry an advantage. Appropriate qualifications required.

Salary scale: Lecturer I: £5,649-£9,735 per annum
Lecturer II: £7,215-£11,368 per annum
plus £246 per annum London Fringe Area Allowance.
Commencing salary dependent upon qualifications and experience.
Concursus relocation expenses in approved cases.
Further details and application forms from the Principal to be returned by Monday, 24th October 1983. (7152)

LONDON BOROUGH OF ENFIELD

EDUCATION DEPARTMENT

Capel Manor

Institute of Horticulture and Field Studies

Applications are invited for:

LECTURER IN HORTICULTURE (LECTURER I)

This appointment will provide the opportunity for participating in a wide range of horticultural courses at craft, supervisory and management level.
The Institute contains 62 hectares of woodland, parkland and gardens on the borders of attractive, landscaped countryside with the northern boundary of the London Borough of Enfield only 14 miles from Central London.

Candidates should possess an appropriate:

Salary and conditions: Burnham Lecturer I: £5,649-£9,735
London Allowance £315

Consideration given to assistance with removal, relocation costs, temporary housing and domestic allowance.

Application forms (to be accompanied by a recent passport size photograph) obtainable from the Director of Education, PO Box 56, Civic Centre, Silver Street, Enfield, Middlesex, EN1 3XQ, to whom they should be returned by 31st October, 1983. (Ref: ES/10/83)

Department of Business Studies

LECTURER I COMPUTING IN BUSINESS STUDIES

Ref: BF/1/1/6

Department of Secretarial Studies

ASSOCIATE LECTURER IN COMMUNICATION STUDIES

Ref: BF/1/1/1A

Department of Construction

ASSOCIATE LECTURER IN CARPENTRY & JOINERY

Ref: BF/1/1/2A

For further particulars and application forms apply to the Principal, Blackpool and Pricke College of Further and Higher Education, Ashfield Road, Blackpool, FY2 0JH.

Closing date: 21st October, 1983.

The Lancashire County Council is an equal opportunity employer. (8873)

LANCASHIRE COUNTY COUNCIL

CYNGOR SIR GWYNEDD

COUNTY COUNCIL

GWYNEDD TECHNICAL COLLEGE

BANGOR

Required for January 1984

LECTURER Grade II

In Engineering Drawing/Design

and Tool Design to TEC Higher Certificate level

LECTURER Grade II

In Housekeeping and Catering

Salary in accordance with Burnham FE scales for Lecturers II: £7,215-£11,368

Application forms and further particulars from the Principal, Gwynedd Technical College, Bangor, Tel: Bangor 364186. Closing date: 24th October 1983. (8307)

LINCOLNSHIRE

GRANTHAM COLLEGE

Ref: BF/1/1/6

Department of Secretarial Studies

ASSOCIATE LECTURER IN COMMUNICATION STUDIES

Ref: BF/1/1/1A

Department of Construction

ASSOCIATE LECTURER IN CARPENTRY & JOINERY

Ref: BF/1/1/2A

OVERSEAS

ARGENTINA

BELGRANO DAY SCHOOL

Buenos Aires

This leading co-educational independent school for 1300 pupils has a reputation for high standards of teaching and a strong academic tradition. The school is seeking a full-time English teacher for the 1984-85 year. The successful candidate will be responsible for the teaching of English to pupils in the 11-18 age range. The school offers a competitive salary and excellent benefits. Applications should be sent to the Headmaster, Belgrano Day School, Buenos Aires.

For further details and an application form, please write to the Headmaster, Belgrano Day School, Buenos Aires. The school is an equal opportunity employer.

SULTANATE OF OMAN

ENGLISH LANGUAGE TEACHER

The Royal Guard Brigade of the Sultanate of Oman require to appoint an English Language Teacher for the Royal Band (South). The candidate should be British born and educated, male, between the age of 28 and 31. Single must be preferred. Candidate must be a graduate or trained teacher with at least three years experience teaching English as a foreign language preferably in the Arab world. TEFL qualifications desirable. The candidate should have an appreciation of interest in music.

Conditions Fully furnished two-bedroom ground floor flat with free electricity and water. A car will be made available free of charge including servicing.

Salary A salary of between Rials Omani 440 and 665 per month will be paid according to experience and qualifications. (Currently this is equivalent to approximately Sterling £260 and £1,298). A 20% gratuity is paid after the two years service. The initial contract will be for two years period with the possibility of renewal.

Applications should be made in writing and marked Ref: RGB/ET with full CV in the first instance to the address shown below. Interviews will be held in London during the middle of November 1983 and the successful candidate will be required to commence his duties on or about 1 January 1984.

Charles Kendall & Partners Limited
Albion Court
Palace, Consort Road
London SW7 2BJ

For further details and an application form, please write to the Headmaster, Belgrano Day School, Buenos Aires. The school is an equal opportunity employer.

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GERMANY

PARAGOSCHUE

HILDEBRAND

LEKTOR

to teach advanced English language classes in the German language school. The successful candidate will be responsible for the teaching of English to pupils in the 11-18 age range. The school offers a competitive salary and excellent benefits. Applications should be sent to the Headmaster, Paragoschue Hildebrand, Hildebrand.

For further details and an application form, please write to the Headmaster, Paragoschue Hildebrand, Hildebrand. The school is an equal opportunity employer.

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ADMIN LEA cont.

Education General Inspector (Secondary) (Ref: A12/145)

We require an experienced and well qualified educationist to the above appointment in the Authority's Advisory and Inspection Service which is vacant due to promotion. The post is concerned with general curriculum and professional development work in Secondary Schools. Applicants should have held a senior post in secondary education and be able to demonstrate skill in and understanding of curriculum, management and professional development issues.

Schools Industry Liaison Officer (Ref: S26/145)

£8,754-£11,763 p.a.

As part of a developing commitment to strengthening links between schools and industry, the Authority is seeking a mature and energetic person to undertake this demanding role. Candidates (male or female) should be able to work on their own initiative and will need to demonstrate a proven ability to work effectively across different disciplines and have a sound record of success in their career to date. Education to Honours Degree level is essential and candidates will need to have had successful experience in education and/or in industry and commerce.

Closing date: 28 October.
Further details and application forms for both the above posts are obtainable from the Director of Education at County Hall.

Social Services Senior Instructor (Ref: RN/560/145)

£7,191-£7,896 p.a.

Social Skills for Living
We are seeking to complete the Management Team at Nottinghamshire a new Adult Training Centre in Chilwell. The post will entail the supervision and management of staff.

For further information/informal discussion contact John Coope, Manager, Tel: Nottingham (0602) 257 125. Closing date: 28 October.
Application form and job description may be obtained by writing to the Staffing Section, Social Services Department at County Hall, Closing date: 28 October.
For all the above posts relocation expenses where appropriate. Please quote appropriate reference number.

**Nottinghamshire
County Council**
County Hall, West Bridgford
Nottingham NG2 6BE

EDUCATION COMMITTEE Administrative Assistant Grade SO 1

Salary £9,060-£9,660 p.a.
plus £747 London Weighting

Required in the staff section of the Education Department. The post provides an opportunity to gain good all round experience in the department and an insight into other functions of an Education Department. The post holder will have responsibility for the recruitment and deployment of Supply Teachers.
It is suitable for a qualified experienced teacher.
BRENT IS AN EQUAL OPPORTUNITY EMPLOYER. APPLICATIONS ARE WELCOME FROM CANDIDATES REGARDLESS OF RACE, NATIONALITY, ETHNIC OR NATIONAL ORIGIN, AGE, MARITAL STATUS, SEX, SEXUAL ORIENTATION AND FROM DISABLED PERSONS.

Application forms and job descriptions from the Personnel Division, Room 1, Brent Town Hall Annex, Forty Lane, Wembley, Middlesex HA9 8ER, available by 2nd November. Tel: 01-863 0371 (24 hour Answering service). Reference number E439 must be quoted.

London Borough of
BRENT

HAMPSHIRE EDUCATION COMMITTEE CAREERS SERVICE

A group of a Hampshire LEA of the Careers Service in the following:

ASSISTANT DIVISIONAL CAREERS ADVISER, SOUTH WEST DIVISION, based at the County Offices, Winchester, SO9 2AA.
ASSISTANT DIVISIONAL CAREERS ADVISER, NORTH DIVISION, based at the County Offices, Winchester, SO9 2AA.

For further details and application forms for both the above posts are obtainable from the Director of Education at County Hall.

These posts will be a major challenge to career advisers seeking to develop the management of the service. Other duties will include the management of the divisional careers advisers and the provision of training and support to the divisional advisers.

ASSISTANT DIVISIONAL CAREERS ADVISER, SOUTH DIVISION, based at the County Offices, Winchester, SO9 2AA. £10,559 p.a. (including £1,000 London Weighting).

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Administration General

LEEDS

A key person is required to the above post in the Leeds Education Authority. The post holder will be responsible for the day to day running of the Authority's administrative services.

For further details and application forms for both the above posts are obtainable from the Director of Education at County Hall.

These posts will be a major challenge to career advisers seeking to develop the management of the service. Other duties will include the management of the divisional careers advisers and the provision of training and support to the divisional advisers.

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SOUTHERN REGIONAL EXAMINATIONS BOARD

For the Certificate of Secondary Education

DEPUTY SECRETARY

Applications are invited for appointment to this post which will become vacant upon the retirement of the present holder on 31st December, 1983.

The person appointed should have appropriate academic qualifications, teaching experience at secondary level and experience in the administration of examinations. In addition to deputising for the Secretary across the whole range of the Board's activities, the Deputy Secretary will also play a major part in the development work for proposed examinations at age 18+ and 17+ and other forms of assessment as, for example, graded tests and profiles.

The present salary scale attaching to the post commences at £14,358 and rises by six annual increments of £317 to a maximum of £19,253.

Full details of the post and application forms are obtainable from the Board's office at Avonvale, 33 Carlton Crescent, Southampton SO9 4YL (Tel: 0703 32312).

Completed forms should reach the Secretary by 28th October, 1983.

Interviews for selected applicants will be held on 10th November, 1983.

For further details and application forms for both the above posts are obtainable from the Director of Education at County Hall.

These posts will be a major challenge to career advisers seeking to develop the management of the service. Other duties will include the management of the divisional careers advisers and the provision of training and support to the divisional advisers.

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SENIOR EDUCATIONAL PSYCHOLOGIST Ref No. EDU/1250/CO

Salary Scale Southbury HT Group 8 (0-4) £13,553-£15,189

Applications are invited from qualified and experienced educational psychologists.

The Service is large and offers good opportunities for professional development. It works in close collaboration with Child Guidance, Health and Social Services Departments. Duties will include responsibility for service to the schools in an area of the County; the seniority of the post attaches to a co-ordinating function of the educational psychology services supplied to the County's Social Services Department.

The successful applicant will have an honours degree in Psychology or recognised equivalent qualifications; at least two years' qualified classroom teaching experience; and have successfully followed a course of specific postgraduate professional training as an Educational Psychologist.

For further details and application forms for both the above posts are obtainable from the Director of Education at County Hall.

These posts will be a major challenge to career advisers seeking to develop the management of the service. Other duties will include the management of the divisional careers advisers and the provision of training and support to the divisional advisers.

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